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ORIGINAL ARTICLES.

DIPHTHERIA IN THE CITY OF KALAMAZOO, MICHIGAN, IN 1884.

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To the physician three fields of work present themselves, in which he may spend his time and strength. He may devote himself to the study of the normal and morbid conditions of the human system, simply for the satisfaction received in learning; he may direct his attention to the cure of diseased bodies; or, his thought may be occupied in discovering and making known the cause of sickness.

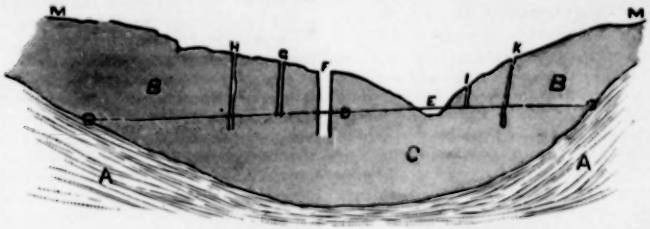
There is, perhaps, no other one disease about which there is so much disagreement among doctors, as diphtheria. It is not my intention here to discuss especially the identity or non-identity of diphtheria, and membranous croup. Neither do I propose to look for those minute forms of life, which one sees so clearly, and another observer says do not exist, save in the mind of the enthusiast. Nor shall I ask the reader to investigate with me, at present, whether we should give to the patient brandy or quinine, turpentine or calomel, ice in the throat or hot applications. I shall endeavor to give facts as they were, uncolored by any pet theory or idea. When an opinion is stated I shall seek to so express it that the reader will at once be able to separate the true from the possibly false.

During the latter part of the year 1884, there occurred in the city of Kalamazoo, Michigan, a large number of cases of diphtheria. At first they seemed to be to a degree sporadic. Though in some localities several persons were ill, yet no connection could be found between the disease in one section and that in another. Before proceeding, however, to give a history of the epidemic, perhaps a general view of the city would not be unprofitable.

Kalamazoo is a beautiful little city of about 15,000 inhabitants, located in the midst of a rich farming region. It nestles in a hollow, with hills nearly surrounding it. The river, from which the place took its name, runs into the city from the east, twice turns back upon its course and then runs northward until beyond the limits of the corporation. Though hills have been mentioned, there is no marked elevation of the earth's surface. The river flows silently, and the wind may easily sweep any street in town. Two creeks join the river within the city walls. At the "Ox-bow" an old settler cut a canal across a narrow neck of land, and located a flour-mill, using his canal for a race. He needed no pond as the river furnishes all the power needed without any special storage of the water. Just south of the city the stream is divided. A portion flows on in its natural channel; the remainder is conducted along higher land to run another mill. Before it gets to this mill the race expands into a storage pond. Along this larger creek, and around the "Ox-bow" of the river, the land is low, and in the springtime it is often covered with water. North of the city the valley spreads out to the width of three-quarters of a mile. The soil of most of this low land is a rich alluvium. Mixed with the mould is more or less sand, and an occasional bowlder is to be seen. Here, too, are peat beds, which furnish a good grade of that fuel. The centre of the city is built upon higher ground, which, like the surrounding hills, is composed largely of sand. In some places so much clay is mixed with the sand that the earth is very firm. In others, the sand may be found in a pure state. Under the whole city, from six to twenty-five feet below the surface, there is a bed of clay. This is not very thick in any place, though its thickness varies greatly. At the paper-mill, a short distance south of the city, an attempt has been made to get an artesian well. The drill went down between 750 and 760 feet below the surface. For about 200 feet the workmen bored through all kinds of drift material, mingled sand, gravel, clay, and bowlders. At that depth a small stream was struck, but it did not flow with sufficient force to answer the purpose. The water had a decided taste and smell of coal oil. A little more than 200 feet from the surface shale was reached. As far as the drill went below that point nothing but shale was found, and at last the enterprise was abandoned.

A study of the geology of this section of the State shows that Kalamazoo is situated nearly in the centre of a large depression in the rock. This basin, about seventy-five miles in diameter, and nearly round, is filled, as has already been mentioned, with gravel, sand, and other drift material. Reference to the cut may aid the reader to understand the elements of the water supply of the city. This figure is of course schematic, and drawn without reference to proportion, as the ratio of the diameter of the basin to the depth of the same is many times greater than one might infer from the diagram. Imagine, then, AA to represent the bed rock, and MM the surface of

the ground. BCB would then represent the drift material. The water level would be practically the same (DDD) for the whole basin, with an outlet (at E) in the Kalamazoo river. At the depth of C there would be little to produce motion in the water; it would be without special current. More water, therefore, coming into the basin in the form of rain or sewage would, as soon as it reached the water level, tend to flow out towards E. Theoretically, therefore, and actual tests show it to be a fact, the water at the water level would not be as pure as that from a greater depth. There are three sources or modes of water supply for the citizens: Open, or dug wells, drive wells, and the city pumping works. This last water is commonly known by the name of the first pumps used at the works—Holly. The source of this water pumped by the city engines is a deep well (figure, F),



so constructed that the water only enters from the bottom. Among the dug wells I included what many call spring water. For example, in case 130, to get drinking water a barrel was sunk in the ground by the side of a ditch. Strange to say, at the level of the water in the ditch the aqueous fluid was to be found in the barrel. To make the work as easy as possible, the point selected for lowering the barrel was where the surface came nearest to the water level. The water to be had from wells on the hill in the northwest corner of the city is purely surface water, as it comes from above the clay stratum already mentioned. Many of the drive wells do not go down deep enough to gain the advantage of drive wells, as they only give surface water.

The present system of sewage was adopted in December, 1880. The first sewers put down were laid the next summer. During the summer of 1884 the work of laying the lateral sewers was pushed vigorously, and at the close of the season about twelve miles of pipe had been laid. In 1885 the work was again pushed forward. The system adopted is essentially that of Col. Waring. Only a very small per centage of the residences had been connected with the public sewers at the time of the outbreak of diphtheria. The Arcadia creek, which flows through the centre of the city, was an open sewer. An ordinance was passed during the year forbidding its use as such. In the older portion of the city the ground is full of cesspools, many of them long since forgotten.

There is a large Dutch population in the city. In their native country they were accustomed to live on low land, and here they settle where most people would not think of locating their houses. All around on the flats one may see their little huts and cottages. Some of these are kept as clean as any house could be; many are less wholesome, and some are decidedly filthy. They are decided fatalists. When the attention of a mother was called to the filthy water drank, as the cause of her child's diphtheria, she replied, "No water! It comes from Himmel." Their children are put to work almost as soon as they can walk. The soil where they live is well fitted for celery raising. The shipping season lasts about six months. To give a little idea of the amount of that article raised one need only state that it is not an unusual thing to ship forty or more tons of celery in a single day; sending it to the Atlantic and Pacific Oceans and to the Gulf of Mexico. The women and children do much of the washing and preparing for shipment. They will often stand all day with their hands in cold water at this labor. In more than one instance children have been sent out to this work before they were entirely well.

Kalamazoo is not a very unhealthy place. The estimated number of deaths for the year 1884–85 was about 12⅔ per thousand. Omitting the deaths from diphtheria and other so-called preventable diseases, the rate would have been 8 per 1000. In 1884, from the 7th day of May to the 21st of June, there was no grave opened in the Protestant portion of the city cemetery; and from May 26th to June 21st there was no interment in the whole cemetery. In June, 1885, there were only ten burials in the city.

We are now prepared to study the earlier cases of the epidemic, and then study the outbreak as a whole.

Case 1.—F., aged 3 years, only child. Parents both deaf mutes. Family live on the upper floor of a frame house. The Arcadia creek, above mentioned, flows through the back yard. The creek is higher than the cellar floor. The little girl was reported ill with scarlatina about the last of April. As health officer I visited the place and confirmed the diagnosis. Ordered the father, who was a mechanic employed in a furniture factory, to remain at home. I ordered them to keep the child as perfectly isolated as possible. The house was in a good condition generally. The cellar was damp, and the mother informed me that, a day or two before, the baby played down cellar for some time. She attributed her sickness to that. She was quite sure the child

had not played with other children. A few days later, on April 29, the attending physician reported that the scarlatinal symptoms had nearly left, but that he had a clear case of diphtheria just developed that day. There had been no known case of diphtheria in the city for several months. The family could not conceive of any means by which they might have come in contact with that disease. The case progressed favorably and in two weeks was reported recovered; but on May 20 the doctor was sent for in haste, and when he reached the house the child was dead, probably from cardiac paralysis. The family used water from a dug well, and there was no sewage for the house. A baby under one year old in the same house did not get sick.

Cases 2, 3, and 4.—F., F., and M., aged 10, 4½, and 2, living about six blocks from case 1, all came down with diphtheria on July 20. The house inside was in good sanitary condition. The sink-pipe emptied upon the surface of the ground near the house, and the filthy water stood there until absorbed by the ground. Six feet from where the water struck the earth a drive well entered the ground. A microscopical examination of the water from this well showed large quantities of organic matter. A former occupant of the house "could not live in Kalamazoo on account of her health." On July 25 the mother of these children was taken with diphtheria. The use of the well water was stopped, and all except case 3, which died of septicæmia, recovered. I could not trace these cases to a previous case.

Cases 6 and 7 lived just around the corner from the preceding, and had played with them before they were taken sick. They were taken sick on July 26 and 30 respectively. Case 6, F., aged 8 years, lived in an old house, which sat down on the ground, without cellar wall, and which showed marked signs of decay. Both these families used dug wells, and neither place had sewage.

Case 8.—Colored, M., aged 12 years, was taken sick August 1st. Lived in an old house without sewage. Used dug well. Could not trace this to any preceding case.

Case 9.—M., 15 years old, lived in the south-eastern portion of the city. (The others were all north of Main street.) Could not trace the case to preceding cases. House near marsh land, and no ventilation under the rooms where he lived. Taken sick August 5. Died August 24 of cardiac paralysis.

Case 10.—M., aged 3, taken sick August 16th, and

Case 11.—F., aged 7, taken sick August 17th, lived in the north-eastern portion of the city in an old house without other foundation than the earth. A hole in the ground was called a cellar, and there the winter's wood was kept, and the bark and sawdust accumulated. Could not trace to other cases.

Cases 12 to 17, inclusive, were colored children, in two houses, and though I could not trace them to case 8, yet they may have taken the disease from him. The sanitary condition of their homes was very poor. Three of these cases died.

Case 18.—M., 12 years old, was taken sick September 28. He had always been sickly. The family lived on the third floor of a tobacco store. Used Holly water and city sewage. Traps imperfect; alley in the rear not in good condition. Died suddenly from rupture of an abscess in the pharynx. Could not trace to previous case.

Case 19.—Could not be traced to previous cases. Used water from dug well. Sewage of place nil. House old and decaying.

Case 20.—Mild case. Lived in second story of a store building. Private drain; Holly water; private alley in rear in very bad condition just before the boy was taken sick; slops were thrown out into that alley by neighbors and allowed to stand upon the ground until dried up.

Of the next two cases I simply recorded "bad surroundings." Though I could find no communication with case 19, yet they may have taken the disease from him. More likely they might have all three taken the disease from case 25, though I think they did not do so.

Cases 23 to 25, inclusive, and 35, ages 5, 2½, 9, and 7; sex, F., F., M., M.; taken sick September 18, 18, 15, and 22. The house was a small frame structure of one story. The cellar walls were made of two layers of boards, between which sawdust was packed. In the spring the cellar floor was covered with water. No attempt had been made to ventilate the place. The sawdust was moldy and mushy. In the cellar were the remains of vegetables not less than a year old. The boards around the door-way were quite rotten. There was no provision for the care of slops, but the tidy housewife stepped upon the back porch and threw her dishwater, etc., upon the surface of the ground. The dug well had partially caved in, on account of the giving away of its wooden walls, and consequently the surface of the ground sloped towards the well. The water from the well was used for cooking and drinking. All the children in this house were sick. The boys, who were away from home more or less, were but slightly affected. The girls, who had been in the house much, were very sick, and the older one died. Next door to this family lived another, whose sink-pipe opened upon the surface of the ground among a lot of weeds. From the street both of these places looked very neat and clean. I examined the weeds and found that the ground was a soft slime several inches deep. There was a window over these weeds about five feet from the ground. By this window a child slept. She had diphtheria. The family used a dug well under the house.

Not to be burdensome I will only make a few more selections.

In *Case 40* the drinking water used was very bad.

Cases 55, 56, 58, 59, 60, F., M., F., F., F., aged 3 years, 15 months, 12, 4 and 15 years. First three fatal. Taken sick October 6, 8, 6, 1, and 2, respectively. The three older children were sent out peddling vegetables after they were taken sick. No physician was called until the night before the first child died. Upon examination I found a dug well close by the back door. The kitchen had no floor but the ground. On two sides of this kitchen was a ditch, eight inches deep, which served to receive and hold the family slops. It did not conduct them away.

When I reached the house this ditch was full of black water. The well was not six feet from this ditch, and yet the mother wondered that the health officer would not allow her a couple of weeks before having that ditch filled up.

In another house upon the marsh, with ditches around, and those ditches dammed to help the celery, there were four children, the oldest 11 years old, and the youngest 18 months. All died except the baby. The baby was not sick. In this case a dug well was used, and I found the women standing upon the well platform pouring their slops off from its edge.

In *Case 163* a young lady fell into the fire and was very seriously burned. One of the attending surgeons was at that time attending a case of diphtheria. The general sanitary condition of the house was good.

In one house, old and without sewage, dug well, and no cellar or chance to ventilate under the house, there were eleven cases and seven deaths.

Case 215.—A beautiful little cottage was built on ground that had been used for a long time as a dairyman's cow yard. A well was dug not more than fifteen feet from the privy. Soon after the family moved into the cottage the little girl was taken sick.

In a few cases I could find nothing about the premises in a bad sanitary condition. That, however, was no proof that the disease might not have arisen from filth. The physician reporting case 69 recorded as the source of contagion "unknown." The patient was a butcher, 36 years old. His children were playing with him and even kissing him after the disease was clearly defined, and yet he was the only member of the family attacked. The neighbors had complained of his barn-yard, but the health officer did not think it probable that Mr. F. had taken the disease there. Examination of the meat market showed that right under where Mr. F. stood at his work, there was a water-closet in the cellar. The sewer-pipe was broken and leaked both water and gas. In another instance (from my own practice) a family lived in a new brick block of four houses. Everything seemed to be in good condition until I asked the owner about the sewer-traps. I then found the following condition: There was a large and good cesspool of brick behind the house, and only twenty feet from the building. There was an opening at the surface of the ground for ventilation and cleaning. Four lead pipes connected this cesspool with the four kitchen sinks. There were *no traps*, but the pipes were as straight as possible. The pipe to No. 3 was the shortest and straightest. Since the upper end of the pipe was several feet higher than the out-of-doors ventilator of the cesspool, very naturally in kitchen No. 3 there was frequently to be detected an odor of sewer gas. In this house, all three children had diphtheria without being exposed to any previous case so far as known. Traps were at once put into each sink-pipe. No other children in the block had the disease.

In most families where the first cases were promptly isolated other persons were not attacked.

Table I gives a synopsis of the water supply and sewage of the first 292 cases. I may here express a regret that I did not keep a fuller account of all the cases. Whoever has attempted, however, to keep statistics of this kind readily realizes how difficult it is to get accurate information, and how often the statistician receives an intimation that the information sought is none of his business.

TABLE I.

WATER SUPPLY AND SEWAGE.

	TOTAL.		FATAL.		Percent of Cases Fatal.
	Number.	Percent.	Number.	Percent.	
WATER—					
Holly	53	18	13	21	24.53
Drive Well	101	35	10	16	9.90
Dug Well	137	47	39	63	28.47
Cistern	1	....	....	....	....
SEWAGE—					
Cesspools	33	11	5	8	15.15
City Sewers	6	2	2	3	33.33
No Sewage	253	87	55	89	21.74
TOTAL	292	100	62	100	21.23

About twenty-five per cent. of the entire population of the city use the Holly water. Since only eighteen per cent. of the diphtheria patients used that water, it seems to indicate that they are less likely to take the disease on that account. Probably there are other reasons besides the kind of water drank why these citizens should be less prone to the disease. A very large proportion of the cases occurred among the poor population, especially among the Dutch.

In regard to the portion relating to sewage, it must be noticed that the places where no provision had been made for the care of kitchen slops are decidedly the most prolific of cases, and fatal cases. The very small number of cases in which the premises are connected with the city sewers renders the last column of that line of little value. One of the two fatal cases was No. 163, already mentioned, in which the injuries received nearly took the patient's life, before the diphtheria attacked her. As relating to the subject of sewage, it may be noticed that no cases occurred upon the east side of the river until the dams on the river were fixed, and the water raised enough to overflow some low land there. After that there were nineteen cases, six of which were fatal.

After a careful study of the epidemic, I came to the following conclusions:

1. Diphtheria is essentially a filth disease.

2. It may be produced without any relation to a former case.

3. During the earlier stages it is but feebly contagious.

4. A simple "sore throat," including under this head tonsillitis, pharyngitis and laryngitis, may develop into diphtheria, without receiving contagion from a previous case.

5. Diphtheria, after being once produced, may become contagious and epidemic.

6. Diphtheria and the proneness to the disease may be modified by the constitution of the person, and by atmospheric conditions.

7. Diphtheria and membranous croup are the same disease.

To what extent does one attack protect from future attacks? I regret to say that I have no accurate data on this subject. Some persons were attacked a

second time. On the other hand, in one family of four children all but one had the disease some years ago. This year this one had it and died. Those who had had it before escaped this year.

What relation has age and sex to the disease? Table II gives the number of cases of males and females of each age from April 15, 1884, to July 1, 1885. For study the cases are divided into four groups: Those under 6 years old; those from 6 to 10 inclusive; those from 11 to 15 inclusive, and those over 15. It will be noticed that almost ninety-two per cent. of the males, eighty-five per cent. of the females, and eighty-eight per cent. of all cases were under 16 years old.

TABLE II.

NUMBER OF CASES.

	MALES.			FEMALES.			TOTAL.		
A	*N*	*M*	*P*	*N*	*M*	*P*	*N*	*M*	*P*
1	8			5			13		
2	4			12			16		
3	9			15			24		
4	11			15			26		
5	13			12			25		
6	14	45	30.41	10	59	32.24	24	104	31.42
7	17			17			34		
8	11			10			21		
9	16			10			26		
10	11			12			23		
11	8	69	46.62	9	59	32.24	17	128	38.67
12	5			10			15		
13	2			5			7		
14	3			6			9		
15	4			8			12		
16	3	22	14.86	2	38	20.77	5	60	18.13
17	1			2			3		
18	..			2			2		
20	..			1			1		
21	..			1			1		
22	..			1			1		
23	..			1			1		
24	..			1			1		
25	..			1			1		
27	1			..			1		
29	..			2			2		
32	..			1			1		
33	2			3			5		
35	1			2			3		
36	1			..			1		
37	..			1			1		
39	1			2			3		
45	..			2			2		
47	1			..			1		
49	1			..			1		
50	..			1			1		
51	..	12	8.11	1	27	14.75	1	39	11.78
Total	148	148	100	183	183	100	331	331	100

Average Age—Males, 9.03; Females, 10.67; Total, 9.94.

A, Age. *N*, Number. *M*, Total Number. *P*, Percent of Cases.

Table III shows that ninety-three per cent. of the males, ninety-five per cent. of the females, ninety-four per cent. of all cases proving fatal were under 16 years of age. Of the cases over 23 years old, all but four occurred in families where there had been previous cases among the children. Among the four is the butcher mentioned as Case 69. One was an old colored woman who had not had any child sick with it so far as known, but she lived in the neighborhood of cases among the negroes. Of the fatal cases over 15 years old, the boy of 16 was an unusually well developed lad. The girl of 17 was also well developed. So far as could be seen there was no special reason why they should either of them die. The girl of 18 was the one already twice referred to as having been severely burned. The man 33 years old had pneumonia. His four children had diphtheria, and three of them died. After the last death he caught cold, and at the same time diphtheria took hold of him, almost immediately extending through his entire lungs. It will also be noticed that more girls than boys were attacked during the first period. In the next the boys are most numerous. During the years when the maidens are preparing for womanhood they are again more likely to be troubled by the disease.

In the first year of life there were 13 cases—8 males and 5 females; at 2 years there were 16 cases—4 males and 12 females; at 3 years there were 24 cases—9 males and 15 females; at 4 years 26 cases—11 males and 15 females; at 5 years 25 cases—13 males and 12 females; at 6 years 24 cases—14 males and 10 females; at 7 years 34 cases, equally divided; at 8 there were 21 cases—11 males and 10 females; at 9 there were 26 cases—16 males and 10 females; 23 cases in the 10th year included 11 males and 12 females; 17 cases at 11 were divided among 8 males and 9 females; 15 cases at 12 included 5 males and 10 females; 7 cases at 13 included 2 males and 5 females; 9 cases at 14 showed 3 males and 6 females; 12 cases at 15 give 4 males and 8 females; 5 at 16 give 3 males and 2 females; 3 at 17 show 1 male and 2 females; and at 18 there were 2 cases, both females.

The age at which death took place in the fatal cases was as follows: At 1 year 3 males and 1 female; at 2, 6 females; at 3 years 4 males and 4 females; 4 males and 7 females at 4 years; 2 males and 4 females at 5; 4 males and 1 female at 6; 1 male and 3 females at 7; 2 males and 4 females at 8; 1 each at 9; 2 females at 10; 1 each at 11; 1 male and 2 females at 12; 2 females at 13; one each at 14; 1 male and 2 females at 15; 1 male at 16; 1 female at 17; and 1 female at 18.

TABLE III.

FATAL CASES.

	MALES.				FEMALES.				TOTAL.			
A	*N*	*M*	*P*	*T*	*N*	*M*	*P*	*T*	*N*	*M*	*P*	*T*
1	3				1				4			
2	..				6				6			
3	4				4				8			
4	4				7				11			
5	2				4				6			
		13	48.15	28.89		22	51.17	27.29		35	50.	33.63
6	4				1				5			
7	1				3				4			
8	2				4				6			
9	1				1				2			
10	..				2				2			
		8	29.63	11.59		11	25.58	18.64		19	27.14	14.84
11	1				1				2			
12	1				2				3			
13	..				2				2			
14	1				1				2			
15	1				2				3			
		4	14.81	18.18		8	18.60	21.05		12	17.14	20.00
16	1				..				1			
17	..				1				1			
18	..				1				1			
33	1	2	7.41	16.67	..	2	4.65	7.41	1	4	5.72	10.26
Total..	27	27	38.57	18.24	43	43	61.43	23.49	70	70	100	21.15

A, Age. *N*, Number. *M*, Total Number. *P*, Percent of Fatal Cases. *T*, Percent of all Cases.

It will be noticed that 7 seems to be the favorite age for patients. It will also be noticed that boys reached their highest mortality for any age at the

years 3, 4 and 6, losing four at each of those ages. The girls lost seven at the age of 4. Table III shows that the mortality of females was greater than that of males. What is the influence of weather upon diphtheria? Table IV gives the weather report, and number of new cases of diphtheria each week for the last six months of 1884. I often noticed that when the amount of ozone dropped to one or two for two or three days, new cases would be reported, and old ones were likely to be worse. At Christmas time there was considerable snow upon the ground, and there were but two or three cases of diphtheria. The snow melted quite suddenly during the next few days, and within two weeks there were twenty-five new cases reported. When the ground had been frozen a short time the number of cases was small.

TABLE IV.

Week ending		New Cases	Bar.	Ther.	Wind.	Cloud.	Ozone.	Rain.
July (fraction)	5	..	29.091	70.25	3.85	5.08	2.00	0.22
	12	..	29.175	68.14	5.00	6.05	2.14	0.16
	19	..	29.199	64.65	5.04	4.06	1.57	0.07
	26	3	29.215	72.78	5.06	6.00	2.05	1.78
August.....	2	2	29.117	72.43	5.00	7.00	2.00	0.26
	9	1	29.257	69.57	5.09	7.06	2.06	0.33
	16	1	29.366	72.53	4.00	4.00	1.06	0.12
	23	1	29.278	72.11	6.00	4.00	2.00	0.52
	30	3	29.108	64.89	5.04	7.06	2.06	0.76
September....	6	3	29.292	72.78	4.06	5.00	1.05	..
	13	1	29.376	70.22	5.03	4.02	1.08	0.48
	20	9	29.365	63.43	6.08	4.03	1.07	0.18
	27	9	29.216	64.00	6.03	7.00	2.05	1.54
October.....	4	15	29.266	68.24	5.01	8.00	2.02	0.24
	11	27	29.381	59.76	6.02	5.00	2.00	0.96
	18	46	29.392	55.57	5.03	5.00	2.04	0.18
	25	24	29.497	49.09	6.04	5.00	2.03	0.98
November....	1	23	29.361	42.57	5.00	9.05	2.01	0.82
	8	27	29.439	38.48	5.02	6.00	2.07	0.85
	15	27	29.389	45.24	4.07	5.03	1.07	..
	22	20	29.316	36.76	5.09	7.00	3.00	0.12
	29	15	29.063	27.62	6.06	10.00	3.00	0.87
December....	6	5	29.153	40.86	4.07	7.00	3.06	0.83
	13	4	29.335	31.33	7.01	9.00	1.09	1.02
	20	2	29.326	13.81	5.02	9.04	2.07	1.98
	27	1	29.379	15.33	5.05	9.03	3.04	1.34
(fraction)	31	12	29.255	39.75	6.00	10.00	3.02	2.05

Table giving for each week the number of new cases of diphtheria in the city, the average barometric pressure, thermometer (F.), velocity of wind, amount of cloud, ozone, and rainfall. (Cloud and ozone marked on scale of 10.)

Of the fatal cases, the modes or causes of death were as follows:

Cardiac paralysis	8	cases.
Laryngeal stenosis	29	"
Septicæmia	27	"
Laryngeal stenosis and septicæmia	4	"
Rupture of abscess	1	case.
Hæmorrhage (from bowels)	1	"
Total	70	cases.

So far as known, of the cases reported one had the membrane only in the larynx. Three or four females had the membranes over the genitals. Several had the membrane upon abrasions of the skin. I think that, without exception, cases in which blisters had been raised progressed towards recovery more slowly, and were more liable to septicæmia than those not so treated. In several cases the parents had applied kerosene oil to the neck externally, before the physician was called. At first, knowing that some good authorities had recommended that vesicants be used, I permitted my patients to be so treated, though I did not recommend it, but I became thoroughly convinced that the practice did much harm.

Though, as before stated, I do not propose to discuss the subject of therapeutics, yet it may not be out of place here to say that I think, with only one exception, all the physicians here use some preparation of mercury in the treatment of this disease. Some prefer as a general thing the iodides, others the chlorides. Especially in robust children, my own preference is for the mild chloride, given in 2-grain doses, every two or three hours until six powders have been taken for a child 5 years old. The one physician above mentioned depends largely upon whisky and quinine. His success certainly is not better than the average. Within the last year various papers have recommended the burning of tar and turpentine. I think those who have tried it here will not try it again. For laryngeal trouble, however, some have thought they were aided by the vapor of turpentine. I used it in one case with good results. The turpentine was put into boiling water, and the patient inhaled the steam. Noticing the tendency towards cardiac paralysis, from the first I gave all my cases digitalis, and after the fever began to subside I administered tr. nucis vomicæ. Locally I used a solution of carbolic acid or permanganate of potassium. Though I did not try it, I think the mixture of solutions of corrosive sublimate and permanganate of potash would do good; better, indeed, than any other application I have seen suggested. Personally I am convinced that ice applications are detrimental, but I allow the patients to drink water freely. Alcohol is good, but it must be used with caution. I am convinced that we must study to prescribe such medicines as will not disgust the patients, as not infrequently serious results have followed the resistance of the patient against taking the drug prescribed.

The patient's strength must be kept up, not by stimulants, but by food. When all else fails I depend on milk, given, if necessary, in dram doses every half hour. Since most of the cases occurred among the poor and more ignorant population, where they did not receive, and could not get competent nursing, it was the opinion of the attending physicians that if we had had a city hospital where such patients could be cared for, from forty to fifty per cent. of the fatal cases would have been saved, and the whole number of cases would have been diminished.

In what proportion of the cases did paralytic symptoms develop? I could not tell exactly, as physicians made no report of paralysis except incicidentally. I knew, however, of a dozen cases out of the 331. There probably were more. One of these was almost entirely paralyzed, and afterwards recovered. In two cases at least, the paralysis developed certainly a month after apparent recovery took place. One of these proved fatal.

I am under obligations to Mr. A. M. Munn, of the Michigan Asylum for the Insane, for kindly giving me free access to his weather record. The observations were made by Mr. Munn at the Asylum, which is situated upon the hill in the southwest portion of the city.

Kalamazoo, January 10, 1886.

BRAIN TUMORS.[1]

BY PHILIP ZENNER, M.D.,

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Our present knowledge of cerebral localization lends additional interest to the study of all cerebral lesions. This statement is least applicable to neoplasms. They have less value than other kinds of lesions in forwarding our knowledge of localization. This is the more to be regretted, as it seems probable that brain tumors will soon be relegated, in part at least, to the domain of surgery.

Large and even multiple tumors may be almost latent, while small growths may produce marked symptoms. In one instance, a tumor may produce symptoms, and in another not, when in precisely the same part, and the symptoms may be altogether deceptive. The factors which determine the symptoms produced by a tumor are:

Its location.

Its size.

Its character, density, vascularity, etc.

The rapidity and manner of its growth.

The extent of destruction or softening of nervous substance.

These bear a certain relation to the kind of tumor. Cysticerci are of a soft consistence, and never destroy the brain substance. Carcinoma, tubercles and some others usually destroy neighboring nerve tissue. Too many elements, however, come in play to enable us to diagnosticate the kind of tumor from the cerebral symptoms alone. Brain tumors cause pressure by general increased pressure, and by their direct influence on the nervous tissue. They may destroy brain tissue, produce softening of the parts around, or cause symptoms by direct compression. In order to produce the local compression the tumor must be harder than the brain substance. The compressing effects also depend on the locality of the tumor. If it be on the convexity, the brain may accommodate itself to the growth without sustaining any local injury while at the base, where each part is to a certain extent fixed by the cranial nerves and blood-vessels direct local compression is easily produced. Each nerve found at the base is represented by a comparatively large area of the cortex at the convexity, so that a considerable lesion in the latter locality is requisite to produce the symptoms made by a small one in the former. Furthermore, it appears that when a part of the cortex has been destroyed another part will sometimes perform its functions. The tissues next to the bone or rigid membrane are, *cæteris paribus*, compressed to a greater extent than the central part of the cerebral lobe, which is everywhere surrounded by soft brain substance. Paralysis of the olfactory nerves is often produced by compression of the nerves between the brain and frontal bone, so that loss of smell occurs with brain tumors quite independent of their locality. The third, sixth, and other cranial nerves have also been affected in the same manner.

The heightened intra-cranial pressure may also paralyze the nerves by causing them to be constricted where they pass through the tightly stretched dura mater, or to be compressed by distended blood-vessels. It may even produce hemiplegia or other focal symptoms quite regardless of the seat of the tumor. Such occurrences occasion great confusion, and hence it is well for us to remember this rule: That local or localizing symptoms are the less valuable for the purpose of making a local diagnosis the more marked are the symptoms of heightened intra-cranial pressure.

The most prominent symptoms of heightened intra-cranial pressure are headache, convulsions, double optic neuritis, vertigo, vomiting, changes in the pulse and in the mental condition. But even these symptoms have a certain local significance. The headache points to the direct or indirect involvement of the dura mater, the convulsions to the motor areas of the brain, the mental symptoms to the cortex, the vertigo to the cerebellum, vomiting and alterations in the pulse to the medulla. Each of these parts may become affected when there is increase of the general pressure. Headache occurs most frequently when the sensitive dura mater is most easily affected, convulsions when the motor area is most readily irritated.

These symptoms occur most easily when rapid changes occur in the tumor, for instance, rapid growth or transient fluctuations.

Headache is the most common and usually the earliest symptom. The pain is frequently of the greatest intensity, often driving the subject wild. It is then most likely to occur in paroxysms, though it not uncommon to find even the milder headache cease altogether for a longer or shorter period of time. If the pain be quite circumscribed, and constantly in one place, it is likely to point to the seat of the tumor. Usually the pain is not circumscribed, and, except neuralgia of the fifth, is of no value in locating the tumor. It is a singular fact that the headache often diminishes or disappears when paralytic or other focal symptoms occur. The growth of the tumor is probably very slow in those cases in which no headache occurs.

Convulsions are a less common symptom than headache, but occur in nearly half the cases. They have a greater local significance than the headaches.

Double optic neuritis is also a common general symptom, and of all is the most nearly pathognomonic. It probably occurs in the majority of cases, but is sometimes a transient condition.

Vomiting due to brain tumor is usually distinguished from that due to the stomach by its occurrence equally, whether that viscus be full or empty, and by the slight subjective symptoms accompanying it.

Mental symptoms, apathy, loss of memory, somnolence, etc., usually occur at a late period though they are rarely absent.

Intercurrent apoplectic attacks are usually due to hæmorrhage in or about the tumor.

The chief localizing symptoms of brain tumors are paralysis of the cranial nerves.

Tumors of the brain must be diagnosticated from

[1] Read before the Cincinnati Academy of Medicine, on Feb. 1, 1886.

abscess and meningitis, but usually other concomitant conditions will lead to a correct diagnosis.

In the medical treatment, apart from opium as a narcotic, iodide of potassium is by far the most valuable drug. It has been said to effect cures in tumors which were not syphilitic. But it seems probable that in the near future operative interference will be often resorted to in these cases, and it is worthy to consider farther this aspect of treatment. As an operation for the removal of a tumor is chiefly thought of in reference to those on the convexity, I may here consider what symptoms might assist us to a proper diagnosis of these tumors. Among these may be mentioned headache, monoplegia, aphasia and hemiopia. These symptoms under very favorable circumstances may lead us to correct local diagnosis of tumors at the convexity. But we must never forget the rule that the value of localizing symptoms is in inverse proportion to the indications of heightened intra-cranial pressure. Wernicke has suggested tapping the ventricles for the purpose of reducing the intra-cranial pressure.

A symptom very common and frequent is blindness from atrophy of the optic nerves, caused by pressure of the accumulations of the third ventricle which is again usually due to a tumor in the posterior fossa of the skull, most frequently tumor of the cerebellum. Therefore, blindness setting in rapidly and at an early period is a symptom of much localizing value; and not only is it of diagnostic significance, but provided tapping of the distended ventricles should prove serviceable, it would be a valuable guide in treatment. It would indicate to us cases which could at least palliate the symptoms which it would be a great triumph to relieve. Those symptoms are most prominently blindness, often deafness, some headache and other general symptoms of increased intra-cranial pressure.

A CASE OF SARCOMA OF THE LOWER JAW; SUCCESSFUL REMOVAL.[1]

BY OSCAR J. COSKERY, M.D.,

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Peter King, colored, aged 15, born in Maryland, was admitted into the City Hospital, Baltimore, on March 31, 1882. His family history was good. His personal history was as follows: Between two and three years ago his mother had first called his attention to a generally enlarged condition of the left side of his lower jaw, and a consequent swelling of that part of the face. This became more and more apparent, the growth was recognized by his medical attendant to be confined to the inferior maxilla, and, as it spread in every direction, the teeth had been displaced and the tongue pushed well over to the right. About two months before he came under my observation an enlarged gland had made its appearance in the left submaxillary triangle, which frightened the patient, and decided him to have all removed if possible.

FIG. 1.—Cast of face and head before operation.

On April 15, 1882, the patient being fully under chloroform, an incision was commenced in the median line of the lower lip, cutting through the soft tissues to below the chin. From this point the cut was continued over the most prominent portion of the tumor, first outwardly as far as the angle of the jaw, and then upwards to its point of articulation with the temporal bone. The flap being dissected off, was turned up, and the growth exposed. In this step of the operation the facial artery was cut, and required ligation. The right median incisor was now drawn, and the metacarpal saw applied to the jaw just to the right of the symphysis menti. As soon as the bone was sawn through it was seized in the left hand, and its soft connections with the floor of the mouth quickly severed. Then, without attempting the more dangerous task of disarticulating the head of the bone with the knife, strong traction was made upon it, and the neck gave way. The bone forceps were applied and the head of the bone, together with the remainder of the neck, were wrenched from position.

FIG. 2.—Jaw after removal. In most places only a thin shell of bone.

[1] Read in the Section of Dental and Oral Surgery, at the Thirty-Sixth Annual Meeting of the American Medical Association.

Up to this time the hæmorrhage had not been very great. Upon cutting down upon the enlarged gland and enucleating it (which was done with ease), very profuse venous bleeding came on, and it was found that a large branch of the external jugular had been cut. The vessel required ligation at both ends. The skin flap was then brought into position, room near the angle of the jaw being left for drainage, and dry lint was applied upon the wound, a bandage over all.

The boy did well from the first. To keep down the fetor of the discharge "Listerine" was used throughout as a mouth-wash. The cut united kindly, and the patient left the hospital on May 6, 1882, or exactly twenty-one days after operation, with only one suppurating point (that left for drainage), and with very little deformity.

FIG. 3.—Half view of boy three years and a quarter after operation.

Results of microscopic investigation (made and reported upon by Dr. Aug. Hoen, of Waverly, Baltimore Co., Md.): "Microscopically this tumor is made up mostly of a dense white fibrous stroma, staining badly with carmine; in some places this stroma presents dilatations of its fibres, which dilatations are filled with elements of the spindle variety only; in some of the dilatations they are very closely, in others loosely packed. The cells all contain a single oval nucleus, surrounded by a moderate amount of protoplasm. The fate of the cells seems to be their gradual transformation into the fibrous stroma above mentioned, constituting a true fibroid sarcoma, or recurrent fibroid of Paget. Points of degeneration could not be discovered in any portion of the tumor, the tendency of the cellular seeming to be the production of fully formed and mature tissue."

P. S.—Since the above was written, I have been able to get photographs of the boy. From the time he left the hospital he has been making a living as a farm hand. The side view shows the fibroid thickening (cheloid?) so often noticed in the scars of colored people. As will be observed, his general nutrition seems to be good.

MEDICAL PROGRESS.

THE PHYSIO-PATHOLOGY OF FEVER.—MARAGLIANO has studied during the last three years the behavior of the vessels of the skin in beginning and in receding fever, with the hydroplethysmograph of Mosso, often eight to ten hours without interruption. A first series of observations was made on patients who, in the course of the experiments, were spontaneously attacked by fever. The main results of these observations were the following:

1. A febrile temperature was found to be preceded by a progressive contraction of the vessels of the skin.

2. During the height of contraction—when the vessels attain their minimum lumen—we find the climax of the febrile temperature.

3. As long as the temperature remains at its highest level the contraction of the vessels persists.

A second series of experiments was instituted on patients in whom the fever set in after a previous reduction of the temperature to normal by antipyrin, kairine, and thalline. In these experiments Maragliano observed the same phenomena as stated above.

In a third series of experiments patients were used in whom the febrile temperature fell to normal during the experiment without the exhibition of antipyretics. The following results were here obtained: 1. The fever attack is preceded by a progressive dilatation of the vessels of the skin. 2. This dilatation increases simultaneously with the sinking of the temperature, and reaches its maximum when apyrexia appears.

These investigations prove the old theory of fever as advanced by Traube. Basing on the results of his calimetric examinations, Maragliano feels certain that in fever we have to deal with a retention of heat, with concomitant ischæmia of the vessels, and in defervescence, with an increased thermal discharge, with a concomitant vascular dilatation. Still our author does not by any means believe that the retention of heat is the sole cause for the fever. On the contrary, he is positive that still another factor, viz., increase of heat-formation, plays an important rôle in the causation agencies of fever. The increased production of urea and of carbonic acid gas furnish a satisfactory proof for the existence of this increased heat-formation. As to the true significance of this intensified combusition process, we require a good deal more of detailed knowledge. Possibly it is caused simply by an overheating, as it were, following upon the retention of heat.

Naunyn, Lehmann, and others have recently shown that if animals are subjected to an artificially effected rise of temperature, they give off more urea and carbonic acid. Maragliano has observed the same phenomenon in men if they are subjected to a heightened temperature, such as in consequence of warm baths.

At any rate, there is no doubt that an increase in the heat-production takes place, no matter what causes the latter might have. Therefore we can conclude that the rise of temperature in fever is caused by both a heat-retention and an increased heat-production.

This does, not of course, exclude the presence of other still unknown factors.

The experiments and observations made in this connection on various antipyretic drugs are equally interesting.

The first series of experiments were made with kairine, antipyrin, thalline, the salts of quinine, and salicylate of sodium, on individuals who were perfectly afebrile and healthy. The results obtained with Mosso's hydroplethysmograph and Winternitz's calorimeter were as follows:

1. All employed antipyretics cause in apyretic individuals a considerable vascular dilatation.

2. They cause also an increased discharge of animal heat.

3. They produce a fall in the excreted carbonic acid gas.

A second series with these drugs was made on fever patients, and gave the following results:

1. The antipyretic effects of these drugs are caused by a vascular dilatation. When their influence is exhausted, vascular contraction and subsequent rise of temperature ensue.

2. During the period of their activity increased discharge of heat invariably takes place. After their exhaustion the heat discharge decreases, and the temperature rises again.

3. The influence to antipyretic drugs is intimately connected with a reduction of the oxidizing processes within the economy.

As a general conclusion to Maragliano's valuable researches, we can advance the theory that antipyretic remedies act by being able to eliminate the two most important pathogenetic causes of fever. In other words, they prevent vascular contraction, and the thus resulting storing up of animal heat, and increase the heat discharge; besides, they combat successfully the increase of heat formation by reducing the intensity of the oxidizing processes of the economy.

This double action of the antipyretic drugs is probably caused by an influence exerted on the innervation of the vascular system and the so-called trophic nerves. Possibly their action affects directly the medullary centres, which, according to the latest researches of Fano, exert a great influence on the nutrition of tissues.—*Therapeutic Gazette*, Jan. 15, 1886.

TREATMENT OF PELVIC ABSCESS IN WOMEN.—At the close of a paper on this subject DR. PAUL F. MUNDÉ draws the following conclusions:

1. Pelvic abscess in the female is not very common, in proportion to the great frequency of pelvic exudations, and probably does not occur in more than ten per cent. of all cases, the majority of exudations terminating in spontaneous absorption.

2. Pelvic abscess may be either extra-peritoneal, the result of cellulitis (by far the most common variety), or intra-peritoneal, the consequence of pelvic peritonitis. If intra-peritoneal, the adhesive inflammation between pelvic viscera and intestines may so seal the abscess-cavity as to render it *practically extra* peritoneal.

Abscess of the ovary and pyo-salpinx do not belong in the catagory of "pelvic abscess" proper, and do not fall under the same therapeutic rules, unless when, by agglutination to the abdominal wall or to Douglas' pouch, they become virtually extra-peritoneal.

3. Small deep-seated pelvic abscess, not exceeding a capacity of two ounces and minute multiple abscesses in the cellular tissue, can often be permanently cured by evacuating the pus thoroughly with the aspirator. The surrounding exudation is then rapidly absorbed.

4. About one-half of the abscesses open spontaneously into the vagina, rectum, bladder, or through the abdominal wall and ischiatic fossa. These cases may gradually recover without treatment, or the sinuses may persist until closed by surgical interference.

5. Abscesses containing more than two ounces of pus should be opened by free incision along an exploring needle or grooved director, cleared of débris by finger or blunt curette, and drained and irrigated, if necessary, through a drainage tube.

6. This incision should be made at the spot where the pus points most distinctly, which is usually the vaginal vault.

7. In a certain number of cases the pus points through the abdominal wall, generally in the iliac fossa, and the incision should then be ample, and free drainage should be secured.

8. When the pus has burrowed deep into the pelvic cavity, and a probe can be passed from the abdominal incision down to the vaginal roof, mere abdomino-cutaneous drainage will not suffice, and a counter-opening must be made in the vagina, and a drainage tube carried through from the abdominal wound into the vagina. This drainage tube may have to be worn for months. In making this incision, care should be taken not to wound the bladder.

9. The opening of a pelvic abscess which points through the abdominal wall does not differ from, and is no more dangerous than, the same operation elsewhere on the cutaneous surface of the body. It is not an "abdominal section" or a "laparotomy," in the sense that these terms are now used to indicate the surgical opening of the peritoneal cavity.

10. Chronic pelvic abscesses, which have burst spontaneously, and have discharged through the vagina, rectum, or elsewhere for months or years, are exceedingly difficult to cure. This is particularly the case when the opening is high up in the rectum. A counter-opening in the vagina, or enlarging the opening if there situated, the curette, stimulant irrigation, etc., may occasionally succeed, but usually fail.

11. A perityphlitic abscess may point through the abdominal wall, and simulate a pelvic abscess proper. Aspiration will settle the diagnosis; the treatment is the same.

12. The majority of cases of pelvic abscess recover; at least the mortality is small.—*American Journal of Obstetrics*, February, 1886.

THE USE OF UTERINE DILATOR IN THE TREATMENT OF DYSMENORRHEA, AND AS AN AID IN INTRA-UTERINE THERAPEUSIS.—At the meeting of the Alumni Association of the Woman's Hospital of New York, on January 20, DR. W. GILL WYLIE

read a paper on this subject. The reader demonstrated his modified Sims' dilator, cervical protector, and hard-rubber cervical drain tubes, instruments which he was in the habit of using in dysmenorrhea, and for intrauterine medication. He thought that dysmenorrhea was ordinarily dependent on a hyperesthetic state of the cervical and uterine mucous membrane, and the aim of the treatment was to allay this. He urged the necessity of getting rid of all periuterine tenderness, and securing a movable uterus by means of glycerin tampons and hot-water injections before resorting to treatment. In simple cases of dysmenorrhea, gentle dilatation, repeated once a week for a while, accompanied by tonics, ordinarily sufficed. Where there existed a spasmodic element, however, and where there existed sterility, he was in the habit of incising the cervix posteriorly down to the vagina, and then divulsing under an anæsthetic. It was after this process that he placed his drain tubes in the canal, above the internal os, using them instead of a stem. The tubes, being of hard-rubber, could be heated and given the desired curve. Thorough antisepsis should characterize every step of this operation. He prefers this method to Goodell's rapid dilatation, because by this the cervical tissues are apt to be torn. He has also found dilatation of value after the menopause, where on passing the sound, he determines a similar hyperesthesia at about the internal os.

Dr. W. E. Moseley, of Baltimore, did not believe that the aim of slight dilatation was accomplished as well by Wylie's dilator as by graduated conical sounds. He had also noticed the utility of dilatation after the menopause, in cases where there existed slight discharge, and nervousness, and stenosis at internal os. For thorough dilatation he preferred Sims' trivalve dilator, occasionally paving the way for this by Wylie's. In a personal case, which he related, Wylie's dilator had proved too weak to stand the applied pressure. He believed that, through the trivalve dilator, the effect was more thorough, and less harm was likely to be done, owing to the screw attachment for regulating the dilatation.

Dr. Goffe thought that dilatation was especially of value in case of sterility. He much preferred, to rapid dilatation under ether, gradual dilatation once a week during the intermenstrual period.

Dr. B. McE. Emmet stated that he did not believe in obstructive dysmenorrhea, but that pelvic inflammation was at the bottom of every case. Every case of dysmenorrhea was better treated by local applications to the vaginal vault, and constitutional treatment, than by dilatation, excepting, of course, where stenosis, the result of caustic applications, etc., existed. As for intrauterine therapeusis, the uterine canal had better be left religiously alone. The uterine mucous membrane is over-treated when periuterine inflammation is at the bottom of symptoms.

Dr. Porter, of Providence, asked for information in regard to permanency of results, and as to how rapid the dilatation should be.

Dr. Wylie, in closing, said that the dysmenorrhea might return with impaired health, but that in ten years of experience he had not had a failure. The hyperesthesia, the prime factor, is not likely to return. Thought that very few gynecologists would agree with Dr. Bache Emmet. He stated that Sims gave up the trivalve and screw long before he died, and used the instrument which he (the speaker) had modified, mainly by curving the tips. As for the danger from dilatation, there is none if proper antisepsis be resorted to. The objection to conical dilators is that they are apt not to dilate where we wish, at the internal os.—*Am. Jour. of Obstetrics*, Feb., 1886.

Splenic Hypertrophy with Atrophy of Adrenals.—Dr. Robert Saundby, Physician to the Birmingham General Hospital, has just recorded, in the Transactions of the Pathological Society, a very remarkable case of hypertrophy of the spleen with atrophy of the supra-renal capsules. A young lady who was only 18 years of age when she died, had suffered for three years from dark skin, progressive anæmia, and gradual splenic enlargement. She passed dark-colored urine, but this had been habitual with her since birth. This dark color was due to indican. There was never any leucocythæmia or marked oligocythæmia, but the red corpuscles were deficient in hæmoglobin. After death, which resulted from an attack of vomiting, of which the patient had had several at intervals, the spleen was found to weigh 66 ounces. The supra-renal capsules weighed 18 grains and 10 grains respectively, and under the microscope showed simple atrophy of their substance. So far the case may be regarded as one of Addison's disease, due to simple atrophy of the supra-renal capsules, of which Hadden, Coupland, and Barlow have published examples. But the remarkable feature of this case is that the father died at the age of 37 with the same symptoms, and was found to have a spleen which weighed 7½ pounds; while a brother, still alive, presents the same series of phenomena. This coincidence suggests that the atrophy of the capsules has been in each case congenital—a view which is supported by the microscopical appearances of the capsules, in which no trace of inflammatory action was observed. The enormous splenic enlargement present in all three cases distinguishes them from ordinary cases of Addison's disease, in which hypertrophy of the spleen, though frequently observed, reaches very moderate dimensions. The fact that there should be this tendency, even in ordinary cases, to enlargement, indicates, in Dr. Saundby's opinion, that these enormous spleens depend upon the long continuance and extreme degree of the capsular affection. It is noteworthy that Dr. Saundby could discover no change in the structure of the semilunar ganglia, and that, with the exception of pigmentary deposits, the organs generally were free from obvious alterations. —*The Lancet*, January 23, 1886.

Injections of Calomel in Syphilis.—Dr. Neisser, Professor at the University of Breslau, recommends in the *Deutsche Medizinal Zeitung* of November 30, his method of employing calomel hypodermically. He uses the following formula: ℞ Hydr. chlor. mit., Sod. chlor., āā 5 parts; Aquæ dest., 50 parts; and injects a syringeful twice every two weeks, or

once every week, into the gluteal region, penetrating deeply into the tissues. Neisser claims that on account of the long-lasting and yet but very slowly-proceeding absorption of the mercury, this method is alongside of the inunction-cure to be regarded as the most efficacious and energetic treatment of syphilis. He has treated one hundred and twenty-two cases (fifty-four males and sixty-eight females) with these calomel injections, and feels quite gratified at the results. In rebellious and relapsing cases this method gave especially favorable results. The objections that can be urged against these calomel injections are that they occasion a good deal of pain, and not rarely produce infiltrations and abscesses, which untoward effects, however, can all be avoided by an ample ingestion of chloride of sodium, either as *an addition to the food or taken alone*.

The nozzles of the hypodermic syringes used in Germany are about one-third longer than those used in America, and are buried in the tissues to their full length. It is claimed that the danger of forming an abscess is lessened by entering the lowest strata of the connective tissue, or even the muscles themselves. The method as practised in America, however, gives such satisfactory results that there is no occasion to deviate from it.—*Therapeutic Gaz.*, January 15, 1886.

JOINT-DISEASE IN LOCOMOTOR ATAXIA.—At the meeting of the Pathological Society of London, on December 1st, DR. W. B. HADDEN read notes of two cases of joint disease in locomotor ataxy. 1. A man aged 50, three years before admission, began to suffer from a swelling of the left knee; the swelling, after extending down to the ankle, subsided, but recurred in six months. Two years before admission, ulceration occurred in the under surface of the right great toe. Symptoms of locomotor ataxy had existed for three years. On admission, in addition to the lesion already mentioned, there was a perforating ulcer of the right foot. The femur was displaced forwards and outwards, the tibia backwards and inwards; the patellar was much enlarged, and there was a bony plate below it; pus was withdrawn from the knee-joint by aspiration. Amputation was subsequently performed; and, after two attacks of secondary hæmorrhage, he recovered. Along the margins of the articular surfaces were numerous bony outgrowths, but the head of the tibia was the only part affected by atrophy; in the subsynovial tissue in front of the lower end of the femur was some new bone. The only change noticed in the peripheral nerves was some (doubtful) thickening of the perineurium in the internal popliteal. 2. A man who had suffered for many years from severe gastric crises. Six years before he came under observation, the left shoulder became swollen, and subsequently pus was discharged. When admitted, the patient presented well-marked symptoms of locomotor ataxy, and there was atrophy of the anterior group of tibial muscles. The left shoulder-joint was disorganized, and the humerus shortened. About the right elbow and right knee-joints were some bony outgrowths, and the capsule of the shoulder-joint was dilated, and contained some bone. Many pedunculated, cartilaginous, and osseous growths sprang from the interior of the joint, and some were found free in the joint. The head and neck of the scapula had disappeared, and the head of the humerus showed pure atrophy. The spinal cord showed sclerosis of the posterior columns, extending into the lateral columns, and also the anterior root-zone. The postero-lateral groups of cells at the level of the eighth cervical nerve on the left side had disappeared, and nearly all the motor cells at the level of the third lumbar pair of nerves. In the first case, the knee was in a condition of osteo-arthritis; the shoulder in the second was typical of Charcot's joint-disease. The poliomyelitis of the lumbar cord was clearly the cause of the atrophy of the tibial muscles; but whether the atrophy of the motor cells in the cervical region was the cause of the joint-lesion, or secondary, was doubtful. The condition of the medulla oblongata lent some support to Dr. Buzzard's theory.

DR. BUZZARD said that the second case, which had once been under his care, was a most remarkable example of gastric crises. The presence of sclerosis in the medulla oblongata in close relation with the vagus-root, was very interesting, and lent support to the theory he had put forward.—*British Medical Journal*, Dec. 5, 1885.

ALBUMINURIA IN STRANGULATED HERNIA.—J. ENGLISCH, in the *Centralbl. für Chir.*, Nov., 1855, publishes the history of twenty-nine cases of strangulated hernia treated by taxis, and of twenty-five operated on. In the first series he found albuminuria ten times in the urine, in the second twenty-two times. In thirteen cases of hernia, accompanied by inflammation, albuminuria appeared twice. Albuminuria appears as soon as intestinal occlusion reaches a certain period, and presents certain lesions; the more marked is strangulation, the more evident is albuminuria. In partially strangulated hernia it is barely present. When the omentum and appendices are strangulated, or a filled hernial sac is inflammed, albuminuria is altogether absent. When there is gangrene of the intestine, albuminuria is very evident; it decreases slightly after operation. In fatal cases it is more abundant. Urine decreases in proportion as albumin increases. English attributes death in strangulated hernia to renal disturbance, in those cases where the necropsy does not furnish any indication. The albumin precludes any but a slight attempt at taxis, and herniotomy ought to be preferred. *London Medical Record*, Jan. 15, 1886.

ANTIPYRIN AS A HÆMOSTATIC.—DR. E. CASETTI, (*Raccoglitore Medico*, August, 1885; *Gazzetta Degli Ospitale*, September 30, 1885; *Nouveaux Remèdes*, January 15, 1886) is said to have used four and five per cent. solutions of antipyrin successfully as a hæmostatic in a case of epistaxis, in one of resection of the elbow, and in one of removal of a nævus. He thinks it superior to perchloride of iron in not incrusting the surfaces, to the actual cautery in not leaving an eschar, and to ergotin in not being poisonous in ordinary quantities. Its antipyretic effect, and probably its antiseptic action, are additional advantages.—*New York Med. Jour.*, February 6, 1886.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, FEBRUARY 27, 1886.

THE AMERICAN MEDICAL ASSOCIATION—IS IT DESIRABLE TO MAKE MATERIAL CHANGES IN THE PLAN OF ITS ORGANIZATION, PARTICULARLY IN THE DIRECTION OF ASSIMILATING IT TO THAT OF THE BRITISH ASSOCIATION WITH BRANCHES?

A letter in the issue of this JOURNAL for February 6, 1886, over the signature of "Branch," inviting attention to this question, has elicited several interesting letters from well-known members of the Association, which we give in the department of Domestic Correspondence in the present number of THE JOURNAL. These letters contain many suggestions both for and against material changes that are worthy of careful thought.

It may appear to our correspondents, and, indeed, to most of the present active members of the profession, that the main question involved in this discussion is new, or broached now for the first time in connection with the organization of the American Medical Association. Such a supposition, however, is entirely erroneous, for it engaged the attention of the Committee appointed by the National Medical Convention assembled in 1846, and which reported the plan of organization of the permanent Association to the adjourned meeting in the following year in Philadelphia, and elicited full discussion both in the Convention and the first Session of the Association. The real question was, and still is, whether an efficient and general organization of the profession could be founded on a proper application of the principle of *representation* from local organizations to State, and from the State to the National as the union of the whole; or whether the National Organization should be self-constituted, with provision for a broad nominal membership and a *Council* of lesser numbers invested with the whole management of the affairs of the Association, elected by itself, and consequently capable of self-perpetuation. The latter is the essential principle on which the British Association is founded, modified only by the formation of subordinate Branches, each permitted to elect one or more members of the general governing Council.

But the Committee appointed in 1846 to report a plan of permanent organization at the next meeting, after very careful consideration, rejected this principle and reported a plan of organization based entirely upon the representative principle, with a uniform numerical ratio to limit the number of representatives, and entrusting the entire control of the business of the Association to the regularly elected delegates that assembled each year, instead of to any more limited or select Council. It was claimed by those who advocated essentially the plan of the British Association, that the plan recommended by the Committee, having no provision for the election of a governing Council or any considerable number of members, but being dependent entirely on delegates elected annually by State and local Societies, would lack stability and be liable soon to crumble to pieces. On the other hand, it was claimed by a majority of the Committee and others that the creation of a National Organization with all governing authority vested in a limited number of members designated as distinctively *Fellows* or members of Council, elected mainly by the Association itself, and eligible to re-election at stated intervals, was not in harmony with the modes of thought of our people, and would be likely soon to engender jealousies and rivalries both as to individuals and locations.

But much greater emphasis was placed upon the lack in such an organization of any active and powerful encouragement to the formation and support of State and more local organizations. While simple membership in the National Organization would be easy of attainment, without reference to membership in any local or State Society, one of the strongest incentives to the formation and active support of such societies would be lost: whereas, if membership in the National Association could be obtained only through membership in, and election as a delegate by, some regularly organized local Society, it would be constantly acting as a powerful incentive to the formation of such local societies in every part of our country; until at no distant time the great body of the regular professiou would become em-

braced in social organizations—city, town, county, district and State, and from which delegates duly elected would constitute the National Society and make it truly representative of the profession of the United States. It is hardly necessary to state that the views of the Committee prevailed, and the plan of organization proposed was adopted with but little alteration. As there were at that time but few State Medical Societies in existence or in active operation in the States, provision was made for the admission of delegates from all legitimate medical societies, and institutions, including medical colleges, hospitals, asylums and infirmaries.

But the impulse given to the work of organization of the profession, by the successful establishment of the National Association, proved so efficient, that ten years had not elapsed before State Societies which had before been allowed to die were reorganized, and new ones organized in States where none had existed before, until regular State Societies and many of a more local character were in active operation in nearly every State in the Union. And the same active influence in sustaining and extending the affiliated local societies continues until the present time. The progress of events, however, soon developed the fact that the provision in the constitution of the National Association admitting two delegates from the faculty of each medical college, and one from the medical staff of each hospital, lunatic asylum, dispensary, etc., not only gave the medical men connected with those institutions a much larger number of delegates, in proportion to the whole number engaged in them, than were allowed to the society organizations, but it removed one of the strong motives for them to become members and efficient members in the societies in their own State. The fact that these men could go directly as (in one sense) self-elected delegates to the National Organization and become enrolled as permanent members, without any help from either county or State Societies, certainly removed one strong inducement for them to give active support to the latter. Yet by the public positions they held, it was claimed that as teachers, and hospital physicians and surgeons, they were preëminently qualified to impart most interest to all scientific work in the societies of their own localities. But whether conscious of the influence of this relation upon themselves or not, the fact became more and more apparent to others, until it eventually led to an amendment of the constitution by which the sending of delegates was restricted to regularly organized society organizations, thereby requiring the members of college faculties and the staffs of hospitals, etc., to gain admittance to the National Association through the same channels as the rest of the profession. To those who have been careful observers of the progress of events the change has not been without good results. We will reserve the further consideration of this topic for the next issue of THE JOURNAL. He is most wise who learns most accurately the lessons of the past.

MENINGITIS AS A COMPLICATION OF PNEUMONIA.

The testimony of competent observers has placed beyond doubt the fact that lobar pneumonia is occasionally, although rarely, complicated by the occurrence of cerebro-spinal meningitis. Immermann and Heller, out of 30 cases of pneumonia, observed this complication 9 times. In these the meningeal inflammation was of the epidemic variety, and hence these observers accounted for the occurrence of this complication as a mere coincidence without any etiological connection.

They are supported in this view by Mende and Githens. Verneuil and Surugue, on the other hand, explained the occurrence of the complication on the ground of the intimate anatomico-physiological relationship existing between the lungs and the membranes covering the cerebro spinal axis. In order to understand their explanation it should be stated that they, in accord with other observers, recognize the occurrence of a meningitis in the course of pneumonia which is not epidemic, but is a simple inflammation. This is the variety of the disease which, according to Huguenin occurs with considerable frequency at Zürich, the field of his labors. In Ziemssen's Cyclopædia of the Practice of Medicine, vol. 12, page 621, he states that the percentage given by Chvostek, at Vienna, 4 out of 220 cases, is lower than that in Zürich. Huguenin has never witnessed epidemic meningitis as a complication of pneumonia.

Nauwerck, in a case of meningeal inflammation which occurred in the course of croupous pneumonia, discovered thrombosis of the pulmonary artery, and hence was led to conclude the complication was the result of emboli. It is doubtless in reference to this discovery of Nauwerck's that Huguenin says: "In two of the cases in which the pneumonia was found in the stage of suppuration, friable thrombi were found in the pulmonary veins; indeed, in one case, even the thrombi were partially broken down by suppuration. The supposition seems warrantable that puriform broken-down material gets into the arterial current, is carried by it to the pia, and there sets up purulent inflammation." Jürgensen, in his exhaustive paper

on croupous pneumonia in the fifth volume of Ziemssen's work, recognizes the occurrence of this complication, but states that in his experience at Kiel the diagnosis of it was found to be extremely difficult. This he attributes to the fact that the meningitis is likely to declare itself only by "a single group of symptoms." He narrates a case in which the complication was shown only by a decided and obstinate rise of temperature which would not yield either to enormous doses of quinine or the repeated resort to the cold bath. In contrast to these foregoing Wunderlich, Willich and Sielewicz have noted pneumonia as a complication of cerebro-spinal meningitis.

The latest contribution to this subject comes from Warsaw and is by PROFESSOR POPOFF. In 90 cases of lobar pneumonia he has had 3 complicated by meningitis. Two of the 3 died and were examined *post mortem*. The pneumonia was in the stage of red and gray hepatization and the meningitis was suppurative, being in one cerebro-spinal and in the other confined to the convexity. In all 3 cases the pneumonia was protracted and the meningitis occurred from the twelfth to the fourteenth day, and in all the symptoms due to the complication were marked, such as headache, stiffness of the neck, delirium, etc. In the final stages loss of sensibility to pain, inability of the pupils to react to light were noted. All set in with chills and headache. In all the spleen was enlarged and the urine was found to contain albumen. There was also paralysis of the lower extremities for a time in the one which recovered. Popoff has collected 34 published cases of this complication, which together with his 3 make 37 in all. He finds that 27 were examples of the inflammation limited to the convexity; while in 10 there was also spinal meningitis. This fact speaks against the theory of Verneuil and Surugue, since, if the anatomico-physiological proximity of the parts was responsible for the complication, the meningitis should in the majority of instances be cerebro-spinal and not alone cerebral.

Popoff believes also that were Nauwerck's supposition tenable, meningeal inflammation in connection with other affections would be more common; whereas it is well known that emboli find their way more frequently into the substance of the cerebrum than its membranes. Renal disease and alcoholism he regards as predisposing factors. Popoff attributes the complication to the presence of micro-organisms, viz., the pneumonia coccus of Friedländer. He assumes that in the stage of resolution these organisms are taken up into the general circulation and deposited in distant parts, there to excite inflammation. In support of this explanation he cites the fact that their presence has been demonstrated microscopically in the mininges as well as in other organs. Bright's disease and other *cachexiæ* may be of influence in rendering the meninges particularly sensitive to the deleterious influence of the pneumonic poison. Popoff distinguishes three types of this disease: First, the epidemic variety, which, however, has nothing in common with the pneumonia; second, that in which the meningitis is an accidental complication of the pulmonary affection and is due to embolism or otitis interna, etc.; thirdly, the metastatic form, which is caused by the same etiological factor as is the pneumonia. He groups his own cases among this last variety.

Popoff's conclusions are interesting and, if one be inclined to endorse unreservedly the germ theory, it is satisfactory. We are indebted for these facts concerning Popoff's researches to the *Berliner Klinische Wochenschrift*, vol. 2, 1886.

RECENT PROGRESS IN THE EXTRACTION OF CATARACT.

At the meeting of the Académie de Médecine, of Paris, on January 5, M. PANAS read an interesting paper on "The Recent Progress in the Operation of Extraction of Cataract." The first factor in the progress that has been made is, he thinks, the introduction of antiseptic methods into eye surgery; especially when the antisepsis has been post-operative. So satisfactory have been the results, says M. Panas, that surgeons have now been able to return to the flap operation, without iridectomy; reserving the latter for special cases.

M. Panas gives the following rules for operating: 1. Use an antiseptic sure in its action and but slightly irritating; 2. Carry the antiseptic liquid into every recess of the operating field, and for this intra-ocular washing should be the rule; 3. Cut a corneal flap as well regulated in form as in size; 4. The toilette of the pupillary field should be as complete as possible, careful attention being paid to every possible source of infection; 5. Before closing the eye operated upon the iris should be made to contract and be completely reduced; 6. Use a strictly antiseptic dressing, and keep the eye at rest for a sufficient time. Panas regards the 1-20,000 solution of biniodide of mercury as the best antiseptic that he has yet used for these cases. The formula which he uses is 1 litre of distilled water, 5 centigrammes of biniodide of mercury, and 20 grammes of alcohol (90°). The mercury is dissolved in the alcohol, and the solution is then added to the water shaking violently in a large flask, after which it is filtered. This solution may be kept for an

indefinite time. It produces no irritation of the conjunctiva, is well tolerated, save in rare cases, by the cornea, and iris, and may even be injected into the interior of the eye. The bichloride is a less powerful antiseptic than the biniodide of mercury, and is much more irritating.

Panas does not seem to think the objections raised against the use of cocaine even worthy of mention. As regards the incision for the flap, he thinks that one taking in two to three-fifths of the circumference of the cornea sufficient for the extraction of the opacified lens. The puncture and counterpuncture are always in the sclero-corneal limb. With practice the operator will be able to make the corneal flap, in the arc of a circle, by a single stroke of the knife. As a rule he avoids including the conjunctiva in the incision, in spite of the advice of von Graefe and Desmarres, since a conjunctival flap is of no use in the reunion of the corneal wound, and it may cause effusion of blood into the anterior chamber, denudation of the sclerotic, etc., which may retard primary union. As soon as the operation is finished intra-ocular lavage is resorted to, after which a few drops of a solution of sulphate of eserine (1–1000) are instilled, while a pomade of eserine and vaseline is introduced into the conjunctival cul-de-sac. By this means the pupil is kept contracted for twenty-four hours, and the iris is reduced. To proceed with the dressing, the patient is directed to close the eyes gently, and each is covered with a linen bandage greased with a pomade of benzoate of mercury, which, with its antiseptic value, has the advantage of not irritating the eye in the comparatively large proportion of 1½ to 100. Dry carbolized cotton bandages are then superposed, layer by layer, and the whole is then firmly fixed so as to insure immobility of the wounded eye. This dressing is removed every twenty-four hours, guarding against any movement of the eye for three or four days. After this a simple bandage may be used to occlude the injured eye for two or three days. The patient is usually well within seven days.

Besides the shortening of the time of treatment, says Panas, the simplicity of this method is such that he has operated on diabetic and gouty persons, and those in whom acute articular rheumatism or pneumonia have occurred after the operation without cicatrization being retarded. In the treatment of senile cataract, he says, he has returned to the flap extraction without iridectomy; iridectomy being reserved for exceptional cases. Those who are interested in this subject would do well to read, in connection with the views of M. Panas, here presented, the valuable contribution of DR. J. W. THOMPSON, on the "Flap Extraction of Senile Cataract," which appeared in THE JOURNAL of February 20. Panas's paper may be found in the *Bulletin de l'Academie de Médecine*, No. 1, 1886.

YELLOW FEVER INOCULATION.

We learn that Dr. Irving A. Watson, of Concord, N. H., has recently received from DR. DOMINGOS FREIRE, of Rio de Janeiro, a report on the inoculation for the prevention of yellow fever. He has performed more than 6,000 vaccinations, and not a single person has contracted the disease, although many of them lived in the midst of the epidemic and some acted as nurses for those ill with it. Between January and August, 1885 he vaccinated, in Rio de Janeiro while the disease prevailed, 6,051 individuals, not one of whom was sick. Of the whole number, native and foreign, 2,282 were less than 20 years old. In the district where 3,051 were vaccinated, 166 lived in houses where from one to five fatal cases occurred, and 279 unvaccinated persons died. These vaccinations were practiced in the most unhealthy quarters of the city, which epidemics of yellow fever have habitually ravaged.

Though no one has yet shown that Dr. Freire's figures are false, or his methods erroneous, some of our contemporaries have commenced a crusade against him in which epithets are misused for arguments. A Commission of competent medical men, two of whom will be officers of the Government, has been proposed to investigate the matter; and until that Commission reports it would be just as well to let the matter rest *sub judice*.

A NEW MEDICAL JOURNAL.—We have received the prospectus of a new journal called *The Neurological Review*, to be edited by J. S. JEWELL, M.D., of Chicago, and published by Rand, McNally & Co., monthly, containing not less than 48 pages—with departments for original and selected articles, editorial, and reviews. As its name imports, the journal will be devoted to the interests and advancement of the neurological department of medicine. Dr. Jewell established and edited the well-known *Journal of Nervous and Mental Diseases* for several years with unusual ability, and we commend his present enterprise with pleasure, well knowing that whatever he promises he will more than fulfil. The first number of the new journal is to appear between the fifteenth of April and the first of May. All communications on the subject may be addressed to J. S. Jewell, M.D., No. 1239 Wabash Ave., Chicago, Ill.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, February 4th, 1886.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

W. H. H. GITHENS, M.D., SECRETARY.

DR. CHAS. MEIGS WILSON reported some

CASES OF LACERATION OF THE CERVIX UTERI WITH UNIQUE SYMPTOMS.

The histories of the following cases were brought before the Society in order—*first*, to record what the writer believes to be unique symptoms of the lesion; and *secondly*, to elicit discussion in reference to the reflex nervous symptoms of the lesion, and, if possible, to draw the line of demarcation between them and the nervous phenomena of alienation. But a few years ago we were given the doctrine, *ex cathedra*, that lack of contour of the cervix uteri was the principal cause of that train of nervous symptoms of which the histories here cited contain unique examples. Prior to this, the clitoris was supposed to be the source of all the trouble. And now that spaying has become the fashionable surgical procedure, the ovaries have been given the precedence in the causation of the grave reflex nervous symptoms attendant upon pathological conditions of the pelvic viscera. Statistics have pretty well proven that, in a large majority of cases, destruction of the natural contour of the cervix has been the starting-point of pelvic distress in a large number of such cases. The subinvolution, with the subsequent conditions of prolapsus, hyperæmia, hypergenesis of tissue, ectropion of the cervical mucosa, and the inflammation set up by friction of the everted cervical mucous membrane against the posterior vaginal wall, which frequently occurs in neglected cases of laceration of the cervix, are undoubtedly the primary factors of pelvic irritation in many cases, and it is easy to see how this condition may set up pathological conditions of uterus, Fallopian tubes and ovaries secondarily. To say precisely what is to blame is a very difficult matter. The following cases are selected from a large number operated upon by Dr. E. Wilson in private practice, and by the author in the surgical wards of the Philadelphia Lying in Hospital.

Case 1.—Mrs. McF., æt. 32, married, mother of three children, presented herself at the clinic of the Lying-in Charity with the following symptoms: For the past year, she had noticed a tumor about the size of a small fœtal head in the right lumbar and the right half of the umbilical region. The tumor was perfectly smooth, non-nodulated, and freely movable in the abdomen. She had had obstinate constipation, a good deal of vesical irritation; at one time had had a sanguineo-purulent discharge from the vagina; this had entirely ceased for the last seven months. She complained of deep-seated, darting pain in the lower part of the abdomen, backache, intense cephalalgia and photophobia. Her last child had been delivered fourteen months previously, with instruments. She had been under the care of a prominent gynecologist who had diagnosticated floating kidney, and recommended extirpation. After a careful examination, in which I was aided by several professional friends, the diagnosis previously made was concurred in. A careful chemical and microscopal examination of the urine failed to detect any abnormal constituent. It was then determined that laparotomy for removal of the kidney, or cutting down upon it and stitching in proper *situ*, would be alike unjustifiable. Upon making a more careful examination, including the uterus, the patient was found to have an extensive bilateral laceration of the cervix. The contour of the cervix was restored; and although the patient still has her floating kidney, all her distressing symptoms have ceased.

Case 2.—Mrs. S., æt. 32, married, mother of two children; pelvis slightly contracted antero-posteriorly. Both children were delivered alive by forceps. This patient was sent me, by her regular attendant, with the diagnosis of cancer of the rectum. She suffered greatly from backache and headache, was constipated, passed ribbon stools and had agonizing pain upon defecation. She had slight vaginal discharge, and a coffee-colored, foul smelling muco-purulent discharge from the rectum. Rectal examination revealed an ulcerated surface extending apparently for about an inch and a half in length completely around the rectum, about three inches above the anus. Small portions of the granular surfaces of the ulcer revealed, under the microscope, no evidence of malignant growth. Specular examination of the vagina showed extensive bilateral laceration with acute retroflexion. The woman presented no evidence of cachexia. The uterus, though closely bound down by adhesions, was finally restored to its proper axis. After several weeks the contour of the cervix was reformed. Simple astringent applications were made four or five times to the rectal ulcer. The patient made a complete recovery, and has had no return of symptoms since the operation.

Case 3.—Mrs. C., æt. 22, mother of one child, with history of tedious instrumental labor. This patient suffered from violent ovarian neuralgia, augmented at the catamenial periods. She had a profuse leucorrhœa, engorged uterus and enlargement of the right ovary. She also suffered at times from suicidal dementia, which was sometimes so violent that she required restraint. Her case had been diagnosticated pyo-salpinx, and oöphorectomy advised. Examination revealed an extensive bilateral laceration of the cervix, extending on the left side to the vaginal junction. The cervix was restored, with complete cessation of all symptoms. Examination six months after the operation failed to find tenderness or enlargement of the right ovary.

Case 4.—Mrs. S., æt. 37, married, mother of five children. This patient had been incarcerated in a private asylum for fourteen months, suffering with violent dementia. She had the typical appearance of alienation. No clear history could be obtained of her symptoms, except that she had distressing pelvic pain and profuse leucorrhœa. Examination showed extensive laceration of the cervix. Trache-

lorrhaphy was performed, with immediate amelioration of the symptoms. Two months after the operation she was restored to her family completely well. A year or more has elapsed since the operation in each of the cases, and the relief afforded has thus far been permanent. These cases appear to the author to have had unique symptoms following and consequent upon the lesion, though, doubtless, those with more extended chances of observation have met with cases presenting analogous symptoms.

DR. JOSEPH PRICE made some remarks upon the effects of cicatricial tissue in the edges and at the apex of the laceration, of the effect of the laceration in inducing local engorgement and hypertrophy, and thus a long series of consequential symptoms. He spoke of the value of rest and local treatment for the relief of these symptoms, but the relief so obtained is temporary; it will last but a few months, and sooner or later, after the patient is discharged as cured, the same symptoms recur. If the cicatricial tissue is not all removed, and complete union secured throughout the entire thickness of the cervical tissue, the symptoms will return, or even be aggravated by the operation. In his experience, conception results after operation in young women.

DR. HOWARD A. KELLY said that he was glad to hear of the good results in Dr. Wilson's cases, as a year or more had elapsed. He thought cases of laceration of the cervix might be arranged in three classes. 1. When the cervix, although lacerated, remains soft and flaccid, there will be no consequent symptoms. 2. When cicatricial tissue is developed or ectropion is present, marked reflex symptoms will ensue. 3. When there has been natural repair, but with inclusion or formation of hard or scar tissue, there will also be marked reflex symptoms. To this latter class belong those cases, with hypertrophied glands and everted lips, of so-called erosion. These second and third classes must be relieved by rest and local treatment, and then operated upon to keep them well. Complete removal of the hard tissue, and perfect union of the coapted edges, must be secured. Failure in either of these points will cause a return of the symptoms.

DR. BAER said that the symptoms were not due to the laceration, but to its inflammatory consequences. To secure a good result, the inflammatory condition must first be subdued, and then the operation of closing the laceration will be in order. It may take a long course of treatment to secure this necessary condition, but operation will probably fail to secure the desired relief without the preparatory treatment. He had found, in some of these unsuccessful cases, union of the external surfaces only, and in others fistulous tracts between the suture points. Cicatricial tissue seems to be sometimes formed after operation when union occurs by granulation. Simple laceration without ectropion is very rare, and he would advise repair of the laceration in all cases to prevent future resultant inflammatory conditions. It is desirable to have union by first intention to avoid formation of cicatricial tissues and suture-track fistulæ.

DR. WILSON spoke of the choice of method in preparatory treatment. Local treatment once a week will often fail to have a good effect when a week or ten days in bed, with douches of hot water and glycerole of tannin on pledgets of cotton, applied daily, will accomplish rapid relief of the local condition. Great care should be exercised in the removal of tissue, as complete closure of the cervical canal may happen. He has seen two such cases which were detected at the next menstrual periods after the operation; the passage of a spear-pointed probe gave vent to dark grumous material.

DR. HOWARD A. KELLY exhibited a specimen of

HÆMATOMA OF THE OVARY, WITH ADHERENT FALLOPIAN TUBE.

This specimen is an example of a class of cases which stand peculiarly by themselves; cases of aggravated tubal and ovarian disease, on a small scale as compared with ovarian cyst, and yet in which there is enough change in the size and consistency in one or more of the structures of the appendages to afford most satisfactory ground for diagnostic precision under skilled bimanual examination. These cases occupy a middle ground between the larger tumors, where disease is so palpable, and those haphazard attempts, the present reproach of gynecological surgery, in which the operation upon appendical structures is undertaken to relieve a *symptom*, and the diagnosis of pathological ovarian or tubal change is made after removal or not at all.

This is the right ovary of a patient 21 years of age. It is about the size and shape of a large Spanish chestnut. I was able to handle it freely by bimanual examination, and determined exactly its size, shape, consistence and relations before operating. The indications for operative interference after I had made my diagnosis, were greater than in the case of any large ovarian cyst I have ever seen, and the prospects and result of any form of palliation were futile. Almost the whole of this large ovary is filled with a blood-clot, soft and jelly-like in part and in part firm, fibrous and apparently intimately united to the ovarian stroma. This clot is surrounded by a shell of apparently normal ovarian tissue, throughout which are seen a number of follicles and old corpora lutea. A remarkable feature is the way in which the fimbriated extremity of the tube is spread out like a a sucker over the surface of the ovary and glued fast by adhesions, so that the line of demarcation between tube and ovary is but faintly indicated. From the line of junction numerous vessels course in a radiating manner down over the ovary. The left ovary is below normal size, but contains many pea-sized black clots.

The second specimens which I now exhibit were removed this afternoon. The case is an example of the third class, in which the operator has nothing but a symptom to guide him. My patient, 35 years of age, suffered from an increasing menorrhagia for fourteen years. Lately she has been bleeding half the time. She has had recourse to every possible plan of treatment with but slight and temporary relief. The only thing I could do was to perform oöphorectomy and stop her menstruation. One ovary weighs 139 grains, the other 103 grains. A

beautiful corpus-luteum of menstruation, about two and a half weeks old, shows that the hæmorrhages, which retained all along a menstrual periodicity, were in reality menstrual. The tubes are free from disease. In one ovary a globular pellucid cyst lies between the layers of the broad ligament in close proximity to the fimbriæ, the tubo ovarian ligament being spread out over its surface.

Dr. Wilson called attention to the fact that in the first specimen the tube had been occluded by a torsion or twist upon itself.

Dr. Baer remarked that it would be interesting to know the results in Dr. Kelly's last case. In such a case there is of necessity a cause for the hæmorrhage; there is no apparent diseased condition of ovary or tubes sufficient to account for it. Hæmorrhages from the uterus are often associated with vegetations upon its lining surface, but these are not always present. He alluded to one case in which hæmorrhage continued to be profuse after the removal of the tubes and ovaries, which had been very much diseased.

Dr. Price remarked that in this last case the continued hæmorrhage might be the result of body habit, although the original cause might be removed.

Dr. Harris spoke of a case of fibroid tumor of the uterus with menorrhagia, in which removal of the tubes and ovaries gave immediate relief.

Dr. Kelly had, eight months ago, removed both ovaries and tubes, and the menorrhagia still continues. In the case operated upon to-day the curette had been used, but no vegetation had been found. A strong tincture of iodine applied thoroughly to the inside of the uterus and vaginal packing would quickly stop the hæmorrhage for the time, but it would soon recur. Operation was performed to relieve the symptom hæmorrhage by bringing on the menopause, and not because the ovaries were supposed to be diseased.

Dr. Joseph Price exhibited specimens from a case of

PYO SALPINX.

The tube was as large as the finger and cheesy in consistence, and was easily broken, even by the bite of the hæmostatic forceps. The patient was in a typhoid condition, with high evening temperature, emaciation, quick pulse, pain in locomotion. There certainly had been leakage of pus before, but two ounces escaped at the time of removal. Adhesions were numerous but were cheesy, and broke down readily. After the operation there was rapid subsidence of the pulse and temperature, with the other symptoms. Free washings of the abdominal cavity through a drainage tube were practiced for a few days. There was a clear history of gonorrhœa. The other tube and ovary were not enlarged.

Dr. Beates remarked that in one case upon which he had operated repeated attacks of peritonitis had caused large deposits of flaky lymph in Douglas's cul-de-sac. These were nicely removed by sponging.

Dr. Baer raised the question of the gonorrhœal origin of the salpingitis in Dr. Price's case, which was unilateral, while gonorrhœa usually causes both tubes to become diseased.

Dr. Price stated that Mr. Tait's new book reported a gonorrhœal case of unilateral salpingitis. Comparing with the male analogue epididymitis, which is usually unilateral, would support the idea of such an origin. A free leakage of secretion from the tube, and absence of constriction, may prevent the accumulation of pus on one side.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, February 15th, 1886.

The President, C. T. Parkes, M.D., in the Chair.

Dr. William T. Belfield gave a brief outline of

SEVEN CASES OF DIGITAL EXPLORATION OF THE BLADDER IN THE MALE.

Case 1.—A patient 58 years old, who had been treated for several years, by various physicians, for cystitis and prostatic enlargement; complete retention had occurred several times. A diagnosis of villous tumor of the prostate was made, the nature of the growth being predicated upon the semi-gelatinous state which the urine presented after standing for a few minutes—an almost pathognomonic symptom when present. Exploration revealed a small villous growth just to the left of the urethral orifice in the bladder; and imbedded in its meshes were found two stones, as large as a pea and a bean respectively, whose existence had not been suspected. Patient made a rapid recovery, and was entirely free from his old commplaint three months afterwards.

Case 2.—A boy 17 years old had for two years suffered from frequent and painful urination, during which time considerable pus was constantly present in the urine. A probable diagnosis of tuberculosis of the urinary tract was made, and was confirmed some time afterward by the discovery of the characteristic bacilli in the urinary pus. At the urgent request of the parent the bladder was explored, with negative result. Some months afterwards nodular enlargement of the prostate and epididymis were developed. Patient's symptoms unimproved by the operation.

Case 3.—A man 63 years old, in the last stages of chronic cystitis, was admitted to the County Hospital. Had been treated for enlarged prostate. No enlargement of this gland could be recognized, but there was found, upon rectal examination, a collection of calculi occupying the exact site of the left seminal vesicle. Upon exploration of the bladder it was found that these calculi were contained not in the vesicle, but in a diverticulum of the bladder, where they were completely encysted and covered with mucous membrane. This covering was torn and seventeen stones were removed. The patient's condition was much improved for two weeks after the operation, but at the end of six weeks he died.

Case 4.—A man 38 years old, suffering from all the symptoms of an extremely tight stricture of the deep urethra. No stricture could be found. Upon exploration of the bladder there was discovered a pedicled cyst attached to the upper orifice of the

urethral opening, and completely occluding the urethra like a valve; the tumor appeared to be as large as a small walnut. During an attempt at removal with forceps the cyst collapsed, about half an ounce of clear fluid escaping. The patient recovered rapidly, and has since remained quite free from urinary irregularities. This appears to be the first recorded instance of simple cyst in the male bladder.

Case 5.—A patient 38 years old, admitted to hospital in a typhoid condition, suffering from cystopyelitis for which no cause was discovered. Exploration of the bladder showed nothing abnormal. The cystitis and pyelitis subsided completely. When patient was able to leave the hospital, it was discovered that he was suffering from an incipient myelitis.

Case 6.—A man 31 years old, admitted to hospital with violent and fetid cystitis. It was found impossible to pass any instrument over a prostatic obstruction into the bladder; from the rectum the prostate was found irregularly enlarged. Upon exploration of the bladder, a malignant tumor, involving the prostate and a large part of the bladder wall, was discovered. Complete anuria ensued, and death from uræmia on the fourth day. At the autopsy, hydronephrosis of the left kidney, caused by a pipestem calculus of the ureter, was discovered.

Case 7.—A man 59 years old was admitted to the hospital for a chronic cystitis of fifteen years' standing, caused by prostatic enlargement. Perineal incision was made for temporary relief. Three weeks later a portion of the obstructing prostate was removed through the perineal wound by the galvano-cautery. Complete recovery; the patient, who had for two years been practically unable to urinate except through a catheter, now passed water freely without assistance; the cystitis subsided. Nine months afterwards, acute uræmia and death. At the autopsy, small cirrhotic kidneys were found. This is believed to be the first case recorded in which a considerable portion of the hypertrophied prostate has been deliberately and intentionally removed.

On concluding his paper, Dr. Belfield spoke of a case which came into the hospital in a state of extreme exhaustion, evidencing violent cystitis. Urine containing pus was passed every fifteen minutes with extreme pain. It was impossible to get an instrument into the bladder more than half an inch. The man was half unconscious and could give no history, but by rectal examination it was discovered that the prostate was very much enlarged in the left lobe, the right lobe appearing normal in consistency and size. The doctor thought this almost a proof that in a man of this age, 31, the seeds of tuberculous disease were present. The bladder was opened and the finger inserted in the usual way, discovering a malignant growth covering an inch and a half of the left wall of the bladder. After the operation the patient passed half an ounce of urine, but died in three days from uræmia. The bladder and kidneys were secured and found to be the seat of extensive hyperinosis, caused by a calculus. Another case was that of an emaciated French Canadian who had had trouble for eighteen years, and had depended entirely for urination upon the catheter for two years. The usual perineal incision was made, and a portion of the prostate removed. The operation was successful and the man was able to do without the catheter, although Dr. Belfield advised its use once a day. In June he had a slight attack of cystitis, due to the fact that he had persisted in ignoring the advice in regard to the use of the catheter. About the 10th of September he was taken with uræmic convulsions, and died on the 18th. The last few days the urine became cloudy again. The bladder and kidneys were secured, and a channel found in the prostate large enough to admit the forefinger. Dr. Belfield thought it would have been better to have cut down from above in the hope of relieving the prostatic tumor.

DR. E. ANDREWS suggested to the members that this subject was more important than has formerly been supposed. The former examinations made in these cases were very imperfect, and though the finger used occasionally to be put in the bladder it was not dreamed that the whole circumference of it could be reached. He thought it should be impressed upon the members of the profession that the bladder can and ought to be explored.

THE PRESIDENT thought this procedure for diseases of the bladder so new that it might be called novel, and it seemed singular that at so late a day the bladder should be explored in this way, when surgeons have so long known that the bladder could be opened in many ways without injury to the patient. He thought the profession greatly indebted to Dr. Belfield for his remarks.

DR. W. M. AXFORD thought an incision in the perineum might facilitate a cure in cases of fistula, which at present are very difficult to cure, but did not know that it had ever been tried. We do know that such fistulæ are very difficult to cure, probably because the urine continually runs over them. The procedure is practically harmless and may effect a cure.

DR. W. T. BELFIELD said, in conclusion, that this procedure of inserting a drainage tube through the perineal wound for curing fistula of the urethra is mentioned in Harris's book, and seems to work with entire success. There was one point upon which he congratulated himself, viz., the discovery of cyst of the bladder. So far as he knew nothing of the kind had been recorded in either the pathological or clinical literature of the bladder. The misery that it can cause is illustrated in the case under discussion, and from its nature it offers every hope of a cure.

DR. W. L. AXFORD read a paper on

NOTES ON GENITO-URINARY SURGERY,

in which he said that he believed gleet is due to a stricture of the urethra, and can be cured by curing the stricture. He believed that dilatation cured a stricture by exciting inflammation at the seat of the stricture, and thus causing the absorption of the exudate. In the treatment of strictures he believed that perineal section is best in strictures which are deep-seated, narrow, or unyielding, or complicated by fistula or urinary infiltration; internal urethrotomy in all strictures of the meatus or fossa navicularis, for they will not stretch. For other strictures he would advise, as the case demanded, dilitation, divulsion,

or internal urethrotomy. If the stricture is resilent, divulsion or internal urethrotomy, preferably the latter. He believed the dull pain in the back, and at times in the head, during the later stages of gonorrhœa, to be due to urethral reflexes. Cure the gonorrhœa or stricture and these disappear.

He cited cases in which severe cephalalgia and skin diseases had been cured by curing strictures by internal urethrotomy. Also, cases in which dysuria and vesical discomfort had been allayed by slitting the meatus. In female urinary troubles, after excluding uterine disease, he had given relief by digital dilatation of the urethra.

Dr. E. Andrews referred to the point whether there is any danger or not in urethrotomy. European statistics show a considerable amount of danger in operations for stricture. He did not know the reason for mortality in Europe, for he thought it the general experience in Chicago that men don't die of these operations. Long ago he had left off keeping count of the cases he had operated on, and could not recall an instance in his own practice or that of any one else in this city in which the patient died in consequence of the operation for stricture. As to the question of divulsion, or cutting, he had performed the two operations indiscriminately, sometimes both on the same patient. He thought divulsion and cutting produce precisely the same result. Some strictures will stretch out under the divulsor and go back again, and cutting is better for these cases, but neither appears to be dangerous. He had found divulsors from New York instrument-makers repeatedly breaking down under strong strictures. Otis's instrument he thought exceedingly strong, but even that had failed in one instance. He expressed the belief that divulsion, thoroughly carried out, is as safe as cutting.

Dr. F. E. Waxham referred to a unique case coming under his care of stricture in a child aged four years. He was convinced, however, that stricture is very rare among children. This was the only case that had come under his observation. Otis alludes to two causes—masturbation and gonorrhœa. In this case he found no history of gonorrhœa, and the mother denied the practice of masturbation. The child was put under the influence of ether; the stricture was so closed that he could only enter the bladder by means of a very fine bougie; this was followed by a larger one, this by a small catheter, and this by a steel sound, and the child was then able to pass the urine without difficulty. Before dilatation the child would undergo the greatest suffering every time he passed water, would scream and strain for several minutes, and oftentimes strain so severely as to cause evacuation of the bowels. After the first dilatation the child did nicely for a week and then was as bad as ever; the second dilatation was three weeks ago, and there has been no further trouble.

Dr. A. B. Strong asked if the cure was permanent after cutting unless constantly followed up with the catheter. He wished to know if there is anything better than simple dilatation. Cutting and divulsion are more rapid, but he thought gradual dilatation offered as good and permanent results.

Dr. W. T. Belfield suggested two points in Dr. Axford's paper that required notice, the value and the safety of cutting. He thought it absolutely imperative that we limit our cutting operations strictly to the pendulous urethra. This was not merely a theoretical and anatomical consideration, but a practical one. He thought Dr. Axford in speaking of the three methods, stretching, divulsion and cutting, omitted one of the most importance, viz., the use of a constant electric current. Although this had not received a great deal of attention from the profession he thought anybody who tried it would never give it up. It is said to produce the most permanent results, and is convenient and easy. He had tried it in his own practice, once in the hospital where he had the privilege of cutting, but tried the battery out of curiosity and found it worked nicely, and again in private practice where it was extremely important to the patient that no perineal section should be done. As to stretching the female urethra with the fingers, he thought it dangerous. When house surgeon in the County Hospital he had seen a woman die of peritonitis when that was done. He thought the best instrument for this purpose to be Stein's dilator, which has a continous dilatation.

Dr. W. L. Axford said, in conclusion, that dilatation always has to be followed out by the occasional passage of the sound for an indefinite period of time; all the patient's life. If the stricture is divided clear through Dr. Otis claims that a perfect cure will be made and no after treatment will be necessary. Dr. Axford thought that Dr. Otis, although an extremist on this subject, is about right. As to cutting in the membranous urethra, he did not think anyone would do that. He had never had experience with the galvanic current, had heard it recommended and also discountenanced. In dilatation of the female urethra he had always used his fingers and succeeded first rate. Would always prefer to use his own hand, as no instrument equals the human hand.

(*To be concluded.*)

DOMESTIC CORRESPONDENCE

BRANCHES OF THE AMERICAN MEDICAL ASSOCIATION.

To the Editor of the Journal:

Dear Sir.—I have read with much interest "Branch's" letter in The Journal of February 6th, and agree with him that the matter ought to be taken up at the coming meeting in St. Louis. Within recent years the Association has taken two important steps—the establishment of The Journal and the admission of "Members by Application." These have materially extended its influence and increased its membership.

The numerical relation between the regular profession in the United States and the Association is still small, but even if an increase exceeded the most sanguine expectations a scattered membership of many thousands would not be so powerful as one smaller but disciplined and united. What is wanted

is organization, a system by which the profession can express itself as a unit upon vital questions, and through which the greatest possible benefit will accrue to individual members. The British Medical Association is thoroughly organized by numerous branches, yet the area of territory in which this system has been found so successful is less than that of many States of the Union. In this vast country members of the American Association are scattered North and South, East and West; the only method of reunion is an annual meeting, which takes many practitioners a journey of 2000 miles to attend, and an expenditure in time of two weeks. During the interval between these assemblies the Association is practically non-existent; it is difficult to obtain even a collective expression of opinion, and as a factor in politics its influence cannot be exerted, owing to the want of proper representation.

It will be impossible for regular medicine ever to attain its rightful position in America without some system whereby its sentiments can be voiced; and this should be the National Association, organized by its branches, in every State and Territory; represented and governed by its council; and kept in constant communication through its JOURNAL. The methods by which this is attainable must be adopted at a general meeting of the Association, but it will be profitable to discuss the matter beforehand, so that they who undertake its inception may have the benefit of previous deliberation. Meanwhile, it is well to deal with the objections which may be urged when it is proposed to interfere with existing organizations.

The "two reasons" which "Branch" puts forward in regard to State Societies are really the principal obstacles to encounter, namely: status and finance. Of these the first is least important. There would be no "dependency" except in theory. The Society which organized with similar objects and adopted the "Code of Ethics" of the Association for its guidance is already in close affiliation; otherwise its autonomy is complete. In its own section it should be supreme, and it would remain the centre to which the local societies focus. The subject of finance is more important and must be carefully considered. It is not too sweeping a statement that no State Society is numerically as strong as the regular profession in that State would entitle it to be. Its income is small and modest balances in the treasury are the rule. The principal expense is the annual volume of Transactions. Whether this publication is desirable is a question. No doubt much of the matter might be "profitably dispensed" with and the "very bad" papers omitted; but it is well to bear in mind that some of these are reports from various sections and must necessarily be printed. They, however, serve a useful purpose by acting as an incentive to better work, and tending largely to keep alive an interest in the Society and its annual assembly. THE JOURNAL of the Association could not undertake to publish more than the minutes of a meeting, yet any scheme which proposes to abolish the publication of this matter will probably be received with disfavor, and in my opinion may be harmful in its action. With local or County Societies the case is different. They do not publish their transactions, and the actual running expenses are comparatively trivial, so that their amalgamation would present fewer difficulties.

It is open to consideration which should be adopted, either to make each State Society a Branch of the Association, or to organize small Branches and leave the State Societies as now constituted. As a commencement the latter appears to be the most feasible project and likely to afford a large measure of success. Taking the expense *per capita* "Branch" says that "the number of members of State Societies who cannot afford to pay two sets of dues is extremely limited." This is very true, and with it comes a question of economy. A large number of physicians belong to a local society, the State organization, and the Association as well, so that they pay three sets of dues. If, therefore, a comprehensive scheme be devised which shall organize the profession under one common head, a saving can certainly be effected.

I trust that the matter will be fully discussed and some measure adopted which will enable a Republic of Medicine to rise and flourish in these United States. Yours truly,

JAMES H. PARKINSON, L.R.C.S.

Sacramento, California.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—In your issue of February 6th is an item of correspondence on "Branches of the American Medical Association." I am sorry that I cannot altogether agree with the conclusions of your correspondent as to the propriety or wisdom of the proposed "Branches." Let us examine the question with a little care. "Branch" proposes that we shall, in this country, adopt the method of the British Medical Association to perfect our own organization. Their method, as he sets forth clearly and distinctly, consists in the formation of Branches under regulations of the General Council of the British Medical Association, in which each Council in each Branch has a single voice; and that "any number of members, not being less than twenty, may form themselves into a Branch of the Association, subject to such Branch being recognized by the Council. Each Branch shall be free to govern itself as its members shall see fit; but no Branch law shall be valid which, in the opinion of the Council, may contravene any fundamental law of the Association. Each Branch shall pay its own expenses, and no Branch shall be deemed for any purpose the agent of the Association, or have power to incur any obligation in its behalf."

There are thirty-four such Branches, it is stated, in the British Medical Association. It occurs to me in the consideration of this question that, while the so-called Branch plan may be a very desirable one for Great Britain, it is not adapted to the customs of this country, and the "plan" will not be popular, or meet the wishes of a majority of the profession. The object of the proposed change, if I understand your correspondent correctly, is to increase the power and membership of the American Medical Association. It seems to me that very desirable object will be much better attained, with less friction, if we

simply open the doors of the Association so that its members shall include the members of affiliated State Medical Societies who shall have inscribed their names on the register, and certified their adherence to the regulations of the Association for the government of its members in professional life. The adoption of such a rule would at once make every member, in good standing, of a State Medical Society in affiliation with the American Medical Association sending delegates to its annual meetings, a member of the American Medical Association. The rule might further provide that any member failing to pay his dues for any year would thereby become indefinitely suspended from membership in the Association. This plan, it seems to me, is much simpler than the one proposed by your correspondent. It utilizes already existing organizations, and does not change the present plan of organization, which is what I may designate, as contra-distinguished from the British plan, the American plan, and therefore, in my opinion, decidedly preferable for use here, to any imported from Europe.

It is not possible for every member of a State Medical Society to attend the meetings of the Association, but by their being permanent members of the Association they will be entitled to the receipt of THE JOURNAL, and then, as now, in the election of delegates to attend the business meetings of the Association—they alone having power to vote—they will be fully represented. So, then, it appears, as a matter of fact, the State Medical Societies, in affiliation with the American Medical Association, are already "Branches" in effect, and it only remains to open the doors of membership to all members of the respective Branches, *i. e.*, State Societies in good standing. The autonomy of the "Branch" is nominal in England, in our country it is real, and in accordance with our political system, which medical men, as patriots, ought to uphold rather than decry.

Therefore, while I favor the widest possible basis of membership for our general Association, I should oppose the supplanting of our State Societies by any Branch of whatever degree; and in fact there is no need, for as already pointed out, the present State organizations can not only strengthen the general Association by encouraging large membership therein, but if the American Medical Association bases the claim to membership on the applicant's standing in his own State Association, that basis will also serve as an element of strength to the State Society; thus proving the wisdom of the old moral which we adopt as our political maxim, that "in union there is strength." Very respectfully yours,

JOHN B. HAMILTON, M.D.

Washington, February 10, 1886.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—I have been much interested in the letter which dealt with the subject of "Branches" in your issue of February 6, page 163. No one can take exception to the spirit of that letter, though one may differ when it comes to the details and their execution. The formation of such Branches, in my opinion, should proceed somewhat differently from the method suggested by "Branch."

In the first place the American Medical Association should be divided into a *governing body* and a *working body*. The latter could be composed, as it is now, of members of the regular profession, who have attended in the capacity of delegates to this part of the organization, its Sections, and of "Members by Application." The former should be composed of *delegates only* of State and Territorial Branches, who should be chosen by these bodies under rules made by the American Medical Association, somewhat like this:

1. The Branches of the American Medical Association shall consist of the legally recognized State or Territorial medical organizations.

2. The State or Territorial Branches of the American Medical Association shall be composed of two parts, a governing body and a working body. The former shall be composed of delegates, one for every subordinate society, of all medical organizations, who recognize the authority and subscribe to the constitution and By-laws of the State or Territorial Branch of the American Medical Association.

3. The working body shall consist of all regular physicians, who are elected to membership under the rules of the Branch, not conflicting with those of the American Medical Association. All laws and all matters tending to maintain and enhance the interests of the American Medical Association, its Branches and their members, shall emanate from the governing bodies, to be known as the Council of the American Medical Association and the Council———Branch of the A. M. A respectively, with this proviso, that everything suggested by such Councils must receive a ("two-thirds," or "three-fourths"?) vote of the whole Association in annual meeting assembled to legalize it. And, further, no rule or motion shall be adopted by a Branch, or its component parts, which conflicts with the already existing rules of the higher organization.

4. The Council of the American Medical Association shall consist of one delegate for every (ten or twenty?) members of the State and Territorial Branches. Said delegates must be members of the Council of their respective State or Territorial Branches. Provided, however, that no person shall be eligible to the Council of the State or Territorial Branch, who has not submitted a paper, in some Branch of the science of medicine, which has been accepted for publication by his society. And provided further, that no person be eligible to membership in the Council of the American Medical Association, who has not submitted a paper upon some subject connected with the science and art of medicine, which has been accepted for publication by the State or Territorial Branch of the American Medical Association of which he is a member.

5. The members of the Councils of the American Medical Association and its Branches shall be known as "Fellows" of the American Medical Association, and as "Fellows" of the———Branch of the A. M. A. respectively. And they shall retain this title as long as they are in good standing in their society and

State or Territorial Branch. All officers of the Branches of the States and Territories, as well as those of the American Medical Association shall during their service be *ex officio* members of the Councils of their respective societies.

Such suggestions amended as wisdom shall dictate, would be followed by many benefits; the formation of local societies, both in cities and counties would be stimulated; the State organizations would grow strong, *pari passu* with the multiplication of local societies, and the whole profession of the United States would have the novel experience of demonstrating for itself, that "in union is strength." But this beneficial reaction would not only appear in the political and social relations of the medical profession, but also in its scientific aspect. For the scheme offers advancement and position only to those who distinguish themselves by their work in the field of medical science and practice.

A dependency of the State and Territorial Societies upon the American Medical Association would be established only in so far as the Branches need the *strong arm* of *union*, whilst in all other matters they would be as unmolested as ever. For really a moral dependency exists now, as was demonstrated by the action of the American Medical Association towards the New York State Medical Society, and towards a member from Nebraska in late years, who was prevented from taking his seat in the Association on account of non-payment of dues in his State Society. Why not call into life the strength of "legal dependency," when its weaker brother, the "ethical submission," existed long ago? A relationship which would supplant the restriction of the few in wrong, by the protection of the many in right, would certainly be a long step forwards.

Another, and by no means small factor in such a scheme, would be the strength and therefore usefulness, which the JOURNAL OF THE ASSOCIATION would receive. "Branch" says: "It could scarcely be supposed that all the papers could be published in one journal." I cannot understand why such a supposition should not be entertained. If the membership of the American Medical Association could be doubled, why should not THE JOURNAL OF THE ASSOCIATION be enlarged one-half its present size? A journal of the dimensions of the *London Lancet* could easily publish, in its fifty-two yearly numbers, all the papers submitted at the State Society meetings and and at the annual meeting of the Association—especially if a little more of the "survival of the fittest" were indulged in, which would be as beneficial to medical literature as it is to nature. The present tendency in medical journalism is evidently in the direction of the representation of specialties, thus limiting the need of general journals more and more. These will find their usefulness only in the publication of *news*, and of matters of general interest to the profession, and these things the JOURNAL OF THE ASSOCIATION could certainly furnish, and fitly so, for every physician in the United States. And here the suggestion of "Branch," somewhat modified, would apply: Members could publish their papers in journals devoted to the specialty of which they treat, and if these journals did not accept them it can most generally be surmised that the emanation was not worth printer's ink. It is eminently correct that many papers, instead of making the costly yearly transactions more costly still, had better find an early grave in the waste basket of the editorial sanctum.

It will be seen that my scheme differs from that of "Branch" in one particular materially. He says of the British Association: "Any number of members, not being less than twenty, may form themselves into a Branch of the Association." This is already true of the American Medical Association; for it recognizes delegates from any regular Medical Society in the States and Territories, and in my opinion this is the very weakest point in its organization. By this action it sustains the Local Societies at the expense of the State Societies, and these in their turn pay the Association with the same coin; with this difference, however, that the Association lavishes its privileges upon independent local societies, whilst the State Society, deprived of the strength of these local societies, sends a weaker delegation to the Association's meetings. The proviso that such bodies must be recognized by their State Societies goes for naught; we have one of these societies in my State; it does not affiliate with the State Society, and yet every member thereof would be entitled to recognition by the State Society and the American Medical Association. They ignore the former and acknowledge the latter, and, permit me to say it, the Association meets only once a year and a good ways off from them, so they are safe.

The *body* of the medical profession of the United States—the American Medical Association—should not be connected with its *fingers* only (the local societies) as it is now, but should interpose the strong *arms*, as represented by the State and Territorial Societies; thus making the fingers more useful, the body more powerful, and the whole more harmonious. This is evidently the object of "Branch;" it is the hope of

STATE SOCIETY.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—In regard to the communication signed "Branch," which appeared in THE JOURNAL of February 6, I submit the following: It seems that the British Medical Association is formed or made up of societies which are known as Branches, and that a man who becomes a member of a Branch is at once a member of the Association, and that a part or the whole of the membership fees and dues go to the Association. The American Medical Association is made up of permanent members and delegates from State, District, County and Local Societies. Until recently, in order to become a member of the Association, a physician had first to be delegated from his Local or State Society, and be thus registered on the books of the secretary. Then he was a permanent member as long as he stood well in his Local and State Societies and paid the annual dues to the treasurer of the Association. Now, any man in good standing in his Local or State Society can become a permanent member of the Association

by bringing proof of such standing, paying his dues and signing the Constitution. In the British Medical Association a physician becomes a member as soon as he joins a Branch.

In the American Medical it is different. Membership in a Local or State Society in affiliation with the American Medical Association only *qualifies* the physician to become a member of the Association. With this last exception, and the dividing the fees and dues paid into the Branch Societies, with the Association, the laws governing in the American Medical are very similar to those governing in the British Association, and I can see no other object in making the changes suggested than that of increasing our membership and strengthening or replenishing our treasury, at the sacrifice of our State Societies, which have done good work in standing as the only gates through which entrance to the Association could possibly be effected; and it occurs to me that the moment they are removed we will let down the bars to hordes of crooks and charlatans, whose crookedness shuts them out of Societies at home where they are best known. Once the Association determines to remove such safeguards, the Code will become a thing of the past and the Association the resort of thousands who disgrace the name of doctor. Fearing that such would be the effect of the changes suggested by "Branch," I must beg to record myself as against the paper in its present shape, though in doing so I ask that you will not class me among the opponents to any change which will redound to the dignity and prosperity of the Association.

Very truly yours,

J. M. KELLER.

Hot Springs, Ark., February 9, 1886.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Laparotomy in the Treatment of Penetrating Wounds and Visceral Injuries of the Abdomen.

At the last meeting of the New York County Medical Association, Professor Frederic S. Dennis read probably the most elaborate paper that has yet been prepared on *Laparotomy in the Treatment of Penetrating Wounds and Visceral Injuries of the Abdomen*, and it was most richly illustrated by pathological specimens of great variety from a number of the cases referred to in it. The conclusions at which he arrived after a full consideration of the subject were stated as follows:

First. That penetrating stab-wounds of the abdomen are less fatal than penetrating gunshot wounds; but that the former are fatal in too great numbers to allow the surgeon to be content with the older methods of treatment.

Second. That if the stab-wound has injured the intestine or any abdominal organ, laparotomy is indicated. It may be indicated also in cases where the gut is not perforated, but where it may have become twisted as a result of the stab-wound.

Third. That in a penetrating stab-wound in which doubt exists, the diagnosis should be made certain at once, in order to pursue a proper line of treatment.

Fourth. That laparotomy offers no additional danger to the patient, if properly performed with the strictest antiseptic precautions.

Fifth. That while the number of cases in which there was an exploratory laparotomy made in stab-wounds of the abdomen affords insufficient data upon which to establish any fixed rule of practice, the same principle which is recognized in the performance of laparotomy for gunshot wounds of the abdomen is also applicable to penetrating stab-wounds.

Sixth. That the enlargement of the original wound for an examination of the peritoneal cavity will not enable the surgeon to exclude in all cases fæcal extravasation, perforation, volvulus and hæmorrhage. These may all exist, and yet no evidence of their presence be manifested upon inspection through a small opening.

Seventh. Neither the size, shape, character and velocity of the bullet, the attitude of the patient at the time, nor the kind of weapon used to produce a stab-wound, seem to Dr. Dennis to influence the question of laparotomy.

Eighth. It is possible to have a fatal hæmorrhage from the large venous trunks in the abdomen, and this hæmorrhage not be discovered until the cavity is about to be closed.

Ninth. That the sutures, if properly applied, will close the perforation in every case, no matter how lacerated the wounds are, or the sutures will close the wound in case of resection of the gut, so that no leakage will occur if water is forced through the sutured interstices.

Tenth. The success of laparotomy is to be attained when every arrangement is complete and perfect.

Dr. Dennis paid a tribute to the remarkable foresight of the late Professor Gross, of Philadelphia, whose prophetic utterances of nearly half a century ago in regard to this subject he quoted, and said that the credit of this great achievement will be found to be due to the influence and teaching of Gross, Marion Sims, and Parkes, of Chicago; while it remained for Dr. W. T. Bull, of New York, to make the practical application of the knowledge acquired from Dr. Parkes's experiments to a higher use. It was indeed, he said, from a cursory view of these chronological facts that laparotomy in penetrating abdominal wounds and visceral injuries was conceived, developed and perfected in America.

Among the cases mentioned in the paper were a considerable number which had been treated by Dr. Dennis himself. While treating of penetrating stab-wounds he reported two cases of great interest, in both of which he was enabled to present the patients, restored to health, to the members of the Association, who had an opportunity of inspecting the cicatrices left. The first was that of a young man, 22 years of age, who was admitted to St. Vincent's Hospital in November, 1885, suffering from two abdominal wounds inflicted with a knife. The intestines, which were perforated, protruded, and there was fæcal extravasation, but not into the peritoneal cavity. The wounded intestine was sewed up with catgut

sutures, and after a careful examination had been made for other wounds in it, returned to the cavity, and the external wound closed. He remarked, in connection with this case, that the operation of exploratory laparotomy was not called for in this instance, because the intestines protruded, and could be drawn out and sufficiently examined without such an operation; and that a concealed wound would have been much more dangerous.

The other case was that of a negro 57 years of age, who was admitted to his wards in St. Vincent's Hospital December 20, 1885. He had been stabbed in the umbilical region, to the left of the median line, and from the wound, which was one and a half inches in length, protruded a finger-shaped piece of omentum. The latter was tightly compressed by the edges of the wound, and was afterwards removed by Dr. Dennis. Antiseptic gauze was immediately placed over the parts, and three hours after the accident laparotomy was performed under strict antiseptic precautions. A vertical incision was first made in the median line, and then a second one, diagonally, which joined the wound to this. The viscera were thoroughly examined from the stomach to the inguinal flexure of the colon. The small intestines were turned completely out of the body, and omentum and mesentery carefully inspected; but no injuries were found. He remarked, by way of comment, that it might be objected that laparotomy was not necessary in this case; but in answer to this he would simply call attention to the fact that this was not known at the time. If the intestines *had* been wounded, and laparotomy had *not* been performed, the patient would undoubtedly have died. The laparotomy was called for, therefore, in order to find out what the actual condition of affairs was. This, he believed, was the first laparotomy which had been made in the case of a stab-wound where it was not *known* that the intestines were wounded. In another case of the same kind, however, he would now recommend that the wound itself should be enlarged sufficiently to make an examination of the intestines before performing laparotomy proper; as this procedure was a little more conservative. The operation in this instance, he wished it to be understood, had not been sudden and unpremeditated, but was the result of much study and experience in connection with other similar cases.

In speaking of gunshot wounds he also reported in detail two cases of his own, in both of which laparotomy was performed. The first was that of a young man, 23 years of age, who was admitted to the 99th Street Reception Hospital January 2, 1886, suffering from a penetrating wound of the abdomen caused by a 32 calibre pistol ball. Severe shock was present, but laparotomy was performed; when it was found that there was the most profuse hæmorrhage in the cavity. The examination showed that the principal source of this was the veins in the transverse fissure of the liver. There was no wound of the intestines. On account of the extreme exhaustion of the patient, twelve ounces of a saline solution were injected into the radial artery. This was followed by marked benefit, and the same thing was therefore repeated every four hours; the canula being in the meanwhile retained in the artery. At the end of forty-eight hours, however, the patient died, and at the autopsy the bullet was found imbedded in the right lobe of the liver; the wound being necessarily a mortal one, on account of the irreparable injury to large blood-vessels.

The second patient, aged 22, was admitted to the same hospital January 10, 1886, also suffering from a penetrating abdominal wound inflicted by a 32-calibre pistol. He had marked shock, and laparotomy was resorted to by Dr. Dennis. There was fæcal extravasation, and seven openings in the intestine, with one in the mesentery, were found. The hæmorrhage was so enormous that, on account of the alarming condition of the patient, the operation had to be abandoned before its completion, and death ensued in forty-eight hours after the injury. At the autopsy the cavity of the abdomen was found completely filled with blood; but the sutures which had been made in the intestines rendered them perfectly water-tight.

He remarked, in connection with the frightful and uncontrollable hæmorrhage met with in these two cases, that at present the great desideratum in laparotomy for penetrating wounds was some means of arresting hæmorrhage from such large vessels as the vena cava and the iliac and portal veins; and it had occurred to him that this might possibly be accomplished by constriction of the thighs and the waist for a sufficient time to enable the surgeon to secure the bleeding trunks. When this point was accomplished, he believed that laparotomy as an operation would meet with the most brilliant success. In one case which he referred to, in which laparotomy was not performed, no less than ten perforations of the intestine were found at the autopsy, and the failure to resort to the operation therefore deprived the patient of the only chance of recovery that he had. In this instance the existence of perforation was not suspected by the surgeon in charge; so that it forcibly illustrated the advisability of exploratory laparotomy even in comparatively favorable cases.

Besides penetrating stab and gunshot wounds of the abdomen, Dr. Dennis mentioned a third indication, viz.: rupture of the intestine. A number of cases, illustrated with specimens, were related. In two the patients were run over, and in the others injuries of various sorts were received. As far as he had been able to discern, only two cases of laparotomy for rupture of the intestine from traumatism had ever been reported. In speaking of this class of cases, he referred particularly to emphysema of the tissues and loss of hepatic flatness on percussion as indications of perforation. Collapse, he said, was the only constant symptom; but it was not pathognomonic. The rupture was always in the small intestine, and the contraction of the muscular fibres usually prevented fæcal extravasation. The performance of laparotomy in these cases enlarged the domain of abdominal surgery; although no successful result in it had as yet been reported.

In treating of the signs of visceral perforation in general he said, in regard to the matter of shock,

that the persistency of the shock was of more significance than its severity; and when it was persistent, it afforded a strong link in the chain of evidence. The shock, however, he said, was more apparent than real; being due rather to the sympathetic than to the cerebro-spinal system, as was also the case in strangulated hernia. He thought its presence should not deter the surgeon from performing laparotomy; and in his own cases he had found that the collapse improved after the opening of the abdomen. Shock, however, affords no direct evidence of perforation; and a number of cases were on record in which, although perforation had actually occurred, there was little or no shock present, and death occurred almost without warning.

In the discussion which followed, Dr. Joseph D. Bryant, who opened the recent debate on the same subject in the Surgical Section of the New York Academy of Medicine, called attention to the necessity of discriminating sharply between the two forms of the operation, viz.: exploratory laparotomy and laparotomy in its entirety. The performance of the former he advocated much more frequently than was now the case; believing, as he did, that when done under proper conditions it exposed the patient to no unusual danger. The performance of the latter, however, was a much more serious procedure; involving no little skill, patience and expenditure of time, and requiring the most favorable conditions for its success. In this connection, he remarked that he would not consider a case of laparotomy in its entirety one in which there were found no injuries of the intestines or other viscera. In regard to shock, he agreed with Dr. Dennis that it was perfectly justifiable to perform exploratory laparotomy whether it was present or not. Whether the exploratory incision was to be made in the median line or not depended on the direction of the violence producing the wound. If this was towards the median line, the incision was to be made in the latter; but if the direction was from the median line, it was to be made at the seat of the external wound. He spoke also of the very great importance of hæmorrhage, and said that it was absolutely necessary, in performing laparotomy in its entirety, that every bleeding point should be satisfactorily secured. Not infrequently very slight oozing became changed to profuse hæmorrhage as soon as the abdominal contents were returned to their places, and the cavity was closed up. Experiments which he had made on dogs (shooting them in the abdomen, and then performing laparotomy), had further convinced him of the extreme importance of this element in gunshot wounds of the abdominal cavity.

Dr. E. G. Janeway said that the absence of hepatic dulness was a good general guide as to the existence of perforation of the intestines; but there were a certain number of cases which simulated this condition. Thus, in a case of typhoid fever under his observation, in which, on account of this symptom, perforation was supposed to have taken place, it was found at the autopsy that the resonance over the hepatic region was not due to perforation, but to the tilting of the liver.

Dr. H. M. Briggs also related a case which went to show that loss of hepatic dulness was not an infallible sign of perforation. It was one of peritonitis, and the absence of liver dulness being detected, it was naturally supposed that perforation had occurred. At the autopsy, however, it was found that this was not the case, but that the intestines had become forced between the liver and the abdominal walls.

Dr. J. W. S. Gouley said that he believed that the views expressed this evening were sound, and that laparotomy was justifiable when we had reason to believe that the hollow viscera had been injured. At the same time, numerous instances were on record in which recovery had taken place under these conditions, and as illustrations he related two cases which had come under his observation during the late war. In one instance the patient had a bayonet wound completely through the body, and in the other a pistol shot also passed completely through the body. In the latter case the right lobe of the liver, as well as the lower lobe of the right lung, was injured, and bile flowed freely out of both openings with the pus. Still, he did not hesitate to say that if he were to deal with such cases to-day, he should prepare himself to open the abdomen. An interesting case, with recovery, which had been under his care during the war, was also related by the President, Dr. Leale.

After this instructive scientific session the members adjourned to the library of the State Association, where they enjoyed a pleasant collation and social reunion, which included the passing around of a festal "loving cup," filled with a most delectable concoction, the offering of Dr. Flint. P. B. P.

TARTAR EMETIC VACCINATION.

To the Editor of the Journal:

Dear Sir.—The articles of Drs. Woodworth and Ziegler bring the following facts to my recollection: As is well known, Prince Bismarck allowed, during the Franco-Prussian war, American surgeons to enter the services of his Government, and appointed the late Dr. Krackowitzer and Dr. Abraham Jacobi, from New York, a Board of Application, to certify diplomas and the respective ability of applicants, who were requested to send in a certificate of a regular medical practitioner in good standing, as to their previous lives, practice, etc. Having been accepted by the Board, I embarked on the Anchor line steamship "Europe" to Glasgow, and from there to the seat of war. After our services ended the well-known Dr. Knapp, of Berlin, was entrusted by his Government with furnishing us the funds for our return travel, and by the way, it was almost as hard to get out of the service as to get in, on account of "red tape."

Thinking that I could save some of the money, I started for Hamburg and looked around for a ship, where I could make my way as surgeon. I succeeded in finding the "Palmerston," bound for New York. We had 700 emigrants on board, no cabin passengers except me. The steerage was good and comfortable, food and water through all our long tedious journey excellent. On the seventh day out I was notified that an old man was sick, and on examining him I

found that he had small-pox. I separated him and the family, two grown daughters, from the rest of the passengers and began to disinfect the ship thoroughly with carbolic acid, sulphur and juniper berries, the latter more for the smell than anything else. The infected man was 67 years old, and died within three days. The daughters had small-pox rather severely, but survived. His clothes and everything pertaining to them were thrown overboard; the girls' clothing was steamed in a special oven. These three cases were the only ones which occurred on our ship. When the passengers heard of it there was quite a panic among them, but after I told them that all possible precautions would be taken by me to prevent the spread of the disease, they quieted down. I began now to inspect every passenger, including the crew, and found that about one hundred of the passengers were not vaccinated. There was no virus on board, and recollecting of having read somewhere about the identity of the pustules of tartar emetic and small-pox pustules, I resolved to try a few inoculations with tartar emetic.

I inoculated myself first, and having been re-vaccinated when fourteen years old, I could not find any difference between the two. From myself I inoculated some babies, and saw that the course was nearly identical with true vaccination; the pustules could not be distinguished from real vaccination pustules. It must be remembered that during our services in the Prussian army we had an extended opportunity to see small-pox (especially among the French), so that I am well aware of what I write. I inoculated all the passengers and had the satisfaction that every vaccination took. Our journey, on account of contrary winds, was a tedious and long one, lasting sixty days, though time passed swiftly enough for me. When we landed in New York I reported to the Assistant Health Officer of the port, the late Dr. Mather, of Albany, the incumbent, Dr. Cochran, then being sick. We got, without any trouble, a permit to land. I am perfectly convinced that by the combined care and cleanliness I extracted from the passengers, and the re-vaccination (or the *morale* of it?) succeeded in staying the ravages of the disease, which might have been very fatal in such a crowded ship as ours.

Yours respectfully, CARL PROEGLER, M.D.

Fort Wayne, Ind., January 24, 1886.

ASSOCIATION ITEMS.

AMERICAN MEDICAL ASSOCIATION.

The Thirty-seventh Annual Session will be held in St. Louis, Mo., on Tuesday, Wednesday, Thursday and Friday, May 4, 5, 6 and 7, commencing on Tuesday at 11 A.M.

The delegates shall receive their appointment from permanently organized State Medical Societies and such County and District Medical Societies *as are recognized by representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association.

Secretaries of Medical Societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are, by special resolution*, requested to send to him, annually, a corrected list of the membership of their respective Societies.

SECTIONS.

"The Chairman of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. . . ."—*By-Laws*, Article 11, Sec. 4.

Practice of Medicine, Materia, Medica and Physiology.—Dr. J. T. Whittaker, Cincinnati, Ohio, *Chairman*; Dr. B. L. Coleman, Lexington, Ky., *Secretary*.

Obstetrics and Diseases of Women and Children.—Dr. S. C. Gordon, Portland, Me., *Chairman*; Dr. J. F. Y. Paine, Galveston, Texas. *Secretary*.

Surgery and Anatomy.—Dr. Nicholas Senn, Milwaukee, Wis., *Chairman;* Dr. H. H. Mudd, St. Louis, Mo., *Secretary*.

State Medicine.—Dr. John H. Rauch, Springfield, Ill., *Chairman*; Dr. F. E. Daniel, Austin, Texas, *Secretary*.

Ophthalmology, Otology, Laryngology.—Dr. Eugene Smith, Detroit, Mich., *Chairman*; Dr. J. F. Fulton, St. Paul, Minn., *Secretary*.

Diseases of Children.—Dr. W. D. Haggard, Nashville, Tenn., *Chairman*; Dr. W. B. Lawrence, Batesville, Ark., *Secretary*.

Oral and Dental Surgery.—Dr. John S. Marshall, Chicago Ill., *Chairman*; Dr. A. E. Baldwin, Chicago, Ill., *Secretary*.

A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting.—*By-Laws*.

Committee of Arrangements.—Dr. Le Grand Atwood, St. Louis, Missouri, *Chairman*.

AMENDMENTS TO BY-LAWS.

By Dr. Foster Pratt, Mich.—Each Section shall nominate its Chairman and Secretary—all other nominations to be made, as now, by the nominating Committee.

By Dr. I. N. Quimby, N. J.—Create a new Section, to be known as the Section on Medical Jurisprudence.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

1400 Pine St., S. W. cor. Broad, Philadelphia.